

**IN THE UNITED STATES DISTRICT COURT  
FOR THE DISTRICT OF SOUTH CAROLINA  
CHARLESTON DIVISION**

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**IN RE: AQUEOUS FILM-FORMING  
FOAMS PRODUCTS LIABILITY  
LITIGATION**

MDL No. 2:18-mn-2873-RMG

**This Document Relates to  
ALL CASES**

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**UNITED STATES OF AMERICA’S MEMORANDUM OF LAW  
IN SUPPORT OF ITS OMNIBUS MOTION TO DISMISS PURSUANT TO  
FEDERAL RULE OF CIVIL PROCEDURE 12(b)(1)**

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## **GLOSSARY OF TERMS**

**AFB:** Air Force Base

**AFCEC:** Air Force Civil Engineer Center

**AFFF:** Aqueous Film-Forming Foam

**AFGM:** Air Force Guidance Manual

**AFI:** Air Force Instruction

**AFR:** Air Force Regulation

**ANG:** Air National Guard

**ARFF:** Aircraft Rescue and Fire Fighting

**Army:** United States Department of the Army

**CERCLA:** Comprehensive Environmental Response, Compensation, and Liability Act

**CWA:** Clean Water Act

**DOD:** United States Department of Defense

**EPA:** United States Environmental Protection Agency

**ETL:** Engineering and Technical Letter

**FWPCA:** Federal Water Pollution Control Act

**HEF:** High Expansion Foam, also commonly referred to as “HX”

**LHA:** Lifetime Health Advisory

**MCL:** Maximum Contaminant Level

**NAVSEA:** Naval Sea Systems Command

**Navy:** United States Department of the Navy

**NPDES:** National Pollutant Discharge Elimination System

**NRL:** Naval Research Laboratory

**OSD:** Office of the Secretary of Defense

**PFAS:** Per- and Polyfluoroalkyl substances

**PFC:** Perfluorochemicals

**PFOA:** Perfluorooctanoic acid

**PFOS:** Perfluorooctanesulfonic acid

**PPT:** Parts per trillion

**RCRA:** Resource Conservation and Recovery Act

**SDWA:** Safe Drinking Water Act

**USAF:** United States Department of the Air Force

**WOTUS:** Waters of the United States

**WWTP:** Wastewater Treatment Plant

*“The features of AFFF used by the military are critical for its successful performance of its national defense missions.”*

*~ Frederick Walker, Chief Fire Protection Engineer, USAF (1987–2014)*

## INTRODUCTION

Plaintiffs challenge the United States military’s use and handling of Aqueous Film Forming Foam (“AFFF”) since the 1970s, contending that the AFFF contaminated their water with “forever chemicals” collectively known as “PFAS.” Out of the 30 complaints currently pending against the United States in this multi-district litigation, 27 bring claims under the Federal Tort Claims Act (“FTCA”) (hereafter, “the FTCA Complaints”).<sup>1</sup> Collectively, the FTCA Complaints implicate four categories of conduct relating to the military’s use and handling of AFFF at installations across the country, dating back 50 years: (1) fire training; (2) fire-suppression systems in hangars; (3) fire emergency responses; and (4) equipment testing for preparedness. In all four activities, the military exercised considerable discretion to use and handle AFFF. Moreover, its decisions were imbued with sensitive policy considerations. Therefore, the FTCA’s “Discretionary Function Exception” bars Plaintiffs’ FTCA claims.

The Discretionary Function Exception, or “DFE,” preserves sovereign immunity over “any claim based upon . . . the exercise or performance or the failure to exercise or perform a discretionary function or duty on the part of a federal agency or an employee of the Government, whether or not the discretion involved be abused.” 28 U.S.C. § 2680(a). To establish subject-

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<sup>1</sup> Twenty-five of the 27 cases implicated in this global Motion challenge conduct at Air Force installations. Only two cases are brought solely against another branch of the military (the Army, in *Village of Waterloo*, and the Navy, in *Newkirk*). Moreover, more than one-third of the cases implicated in this global Motion pertain to only two Air Force sites: Fairchild AFB in Washington State, and Cannon AFB in New Mexico. Three complaints against the United States bring claims only under environmental statutes, and therefore are not addressed in this Motion.

For a complete list of the 27 FTCA Complaints to which this global Motion applies (and the sites/locations at issue in each case), *see* Appendix A.

matter jurisdiction, Plaintiffs must prove that the military’s use and handling of AFFF violated specific and mandatory federal directives, or that the use and handling of AFFF was not grounded in policy considerations. *Berkovitz v. United States*, 486 U.S. 531, 536–37 (1988); *Richmond, Fredericksburg & Potomac R.R. v. United States*, 945 F.2d 765, 768 (4th Cir. 1991).

After years of discovery, Plaintiffs cannot carry their burden. Since 2019, the United States has produced over 675,000 documents. The United States also provided detailed declarations from witnesses with decades of experience regarding the military’s historic use and handling of AFFF, including the former Chief Fire Protection Engineer for the United States Air Force (“USAF”); the former Fire Chief for the USAF; the current Chief of Fire and Emergency Services for the Army; the current Chief Fire Protection Engineer for the Army Corps of Engineers; and the former Director of Navy Fire Protection Programs. These and additional U.S. witnesses were available for deposition. Jurisdictional discovery in this case was exhaustive, by any standard. Yet, Plaintiffs have failed to unearth a federal directive specifically prohibiting any of the military activities at issue in the FTCA Complaints. The absence of any such directive is unsurprising, given that PFOS and PFOA—the PFAS in AFFF—continue to be unregulated under the relevant federal environmental statutes.<sup>2</sup> The military did not begin to restrict installation commanders on the use and handling of AFFF until 2016, and did so incrementally through 2023.

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<sup>2</sup> The relevant statutes are: the federal cleanup statute, the Comprehensive Environmental Response Compensation and Liability Act, 42 U.S.C. § 9601, *et seq.* (“CERCLA”); the federal drinking water statute, the Safe Drinking Water Act, 42 U.S.C. § 300f *et seq.* (“SDWA”); the statute governing the protection of the waters of the United States, the Clean Water Act, 33 U.S.C. § 1251, *et seq.* (“CWA”); and the solid waste disposal statute, the Resource Conservation and Recovery Act, 42 U.S.C. § 6901, *et seq.* (“RCRA”).

Because no mandatory and specific directive governed the military's use and handling of AFFF until 2016, there is a rebuttable presumption that the relevant conduct was also subject to policy considerations. *Seaside Farm, Inc. v. United States*, 842 F.3d 853, 858 (4th Cir. 2016). Plaintiffs cannot rebut this presumption. Jurisdictional discovery demonstrates that the military's use and handling of AFFF since the 1970s accounted for multiple policy considerations, which were reflected in contemporaneously documented risk benefit analyses. AFFF possesses a unique ability to smother fuel fires within a matter of seconds, and it has saved countless lives and billions of dollars in sensitive military aircraft, personnel, and equipment. Therefore, for decades military policy encouraged—rather than prohibited—the use of AFFF. Once the military finally was made aware that AFFF contained PFAS in 2000, the military deferred to the Environmental Protection Agency (“EPA”) concerning the environmental implications of that information. EPA launched studies into the health effects of PFAS-containing chemicals like AFFF, but those studies took time. In the interim, the Department of Defense (“DoD”) took steps to address PFAS releases, including *proactively* allocating over \$9.5 billion (to date) to investigate, mitigate, and clean up PFAS in soils and groundwater under CERCLA § 104. DoD's efforts preceded, and are supplemental to, the 2021 Bipartisan Infrastructure Law, which allocated \$10 billion to address “emerging contaminants,” including PFAS. Many FTCA Plaintiffs have already directly, and substantially, benefited from the DoD CERCLA program.

Through 2016, installation commanders exercised their authority, and broad discretion, to use AFFF for firefighting tasks, including fire training and equipment testing; hangar fire-suppression systems that were integrated into the installation disposal systems; and fire emergency responses. These decisions were subject to policy considerations in furtherance of the military's broad delegation of authority to ensure our nation's common survival and defense.

It would be “unseemly” for this Court to second-guess those judgments through the medium of an action in tort. *Tiffany v. United States*, 931 F.2d 271, 276 (4th Cir. 1991). Because there is no subject-matter jurisdiction over the Plaintiffs’ FTCA claims, they must be dismissed. Fed. R. Civ. P. 12(b)(1).

## FACTUAL BACKGROUND

### **I. A Tragedy Aboard the *USS Forrestal* in 1967 Underscored the Inadequacy of Protein-Based Foams for Firefighting.**

Seconds matter. On July 29, 1967, an F4 aircraft aboard the *USS Forrestal* aircraft carrier inadvertently fired a rocket across the ship, rupturing and igniting a 400-gallon fuel tank on another aircraft piloted by future Senator John McCain. **Ex. D**, Sept. 8, 2020 Decl. of Robert L. Darwin (“Darwin Decl.”), ¶ 10; **Ex. K**, Dep. Tr. of Robert L. Darwin (“Darwin Dep.”), 122:6–123:21.<sup>3</sup> Within 90 seconds of the start of the initial fire, a 500-pound bomb thermally detonated. Darwin Decl. ¶ 10. That explosion caused a chain reaction of additional explosions. *Id.* In total, seven bombs on the flight deck exploded. *See* Ex. 1 to Darwin Decl. (Ex. D), US-Darwin-00010276 at 280–81; **Ex. M** (Video, “Aircraft Carrier Conflagration Control”).

The *Forrestal* fire burned for nearly 17 hours, claiming 134 lives. *See* Ex. 1 to Darwin Decl. (Ex. D) at 280–81. The *USS Forrestal* was also taken out of service during war time, and, altogether, the fire caused \$72 million (in 1967) in damages. Darwin Dep. (Ex. K) 467:12–18; Ex. 1 to Darwin Decl. (Ex. D) at 281. The *Forrestal* fire was the second of three major fires on U.S. aircraft carriers during the Vietnam conflict, in the span of four years. *See* Ex. 1 to Darwin Decl. at 277, 280–282, 291–292, 308, 311. Additional fires on the *USS Oriskany* (1966) and

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<sup>3</sup> Mr. Darwin’s career with the Navy spanned more than 30 years. From 1967 to 1969, he was a Mechanical Engineer with the Fire Protection Systems Section, Naval Ship Engineering Center. From 1969 to 1985, he was the Director, Navy Fire Protection Programs, Naval Material Command. From 1985 until his retirement from the Navy in 1998, Mr. Darwin was the Director of the Fire Protection Division, Naval Sea Systems Command. Darwin Decl. ¶¶ 3–6.

*USS Enterprise* (1969) caused nearly \$64 million in damages and killed 72 sailors, injured many others, and destroyed or damaged at least 17 aircraft. *See id.* at 277, 292, 308, 311; Ex. 2 to Darwin Decl. (Ex. D), US-Darwin-00004230 at 233; Darwin Decl. ¶ 10. At the time, the military was using a protein-based foam to extinguish fuel fires. Darwin Decl. ¶ 12. Protein-based foam could not meet the military’s needs. *Id.* ¶¶ 12, 20. The military needed to find a replacement, and did—in AFFF. *Id.*

## **II. The Naval Research Laboratory Issued a Military Specification for the Use of AFFF.**

After the *Oriskany*, *Forrestal*, and *Enterprise* disasters, John McCain met with Robert Darwin to explain his near-death experience on the *Forrestal*. *See* Darwin Dep. (Ex. K) 123:3–13, 467:24–469:23. Mr. Darwin was the Director of Navy Fire Protection Programs for Naval Material Command, and was therefore responsible for coordination, direction, and oversight of all U.S. Navy fire protection programs. Darwin Decl. (Ex. D) ¶ 4. Mr. Darwin’s group explained to then-Lieutenant Commander McCain the Naval Research Laboratory’s (“NRL”) research on a foam, AFFF, that would more effectively extinguish fuel-based fires on aircraft. Darwin Dep. (Ex. K) 467:24–469:23; *see, e.g.*, Ex. 3 to Darwin Decl. (Ex. D), US-Darwin-00001589 at 589. As this Court has already acknowledged, AFFF’s unique ability to smother fuel fires is attributable to the chemical content of AFFF: to wit, per- and polyfluorinated substances (“PFAS”) named “PFOS” (perfluorooctane sulfonic acid) and “PFOA” (perfluorooctanoic acid). *See* Sept. 16, 2022 Order and Opinion Denying Manufacturers’ Motion for Summary Judgment on the Government Contractor Defense, ECF No. 2601 at 1–2 & n.3 (hereafter, “Order of Denial on Government Contractor Defense”).

NRL’s research had begun in the 1960s. Ex. 3 to Darwin Decl. (Ex. D), US-Darwin-00001589 at 589; *see* ECF No. 2601 at 2. That research took on greater urgency after the trio of



aircraft carrier fires. Darwin Decl. (Ex. D) ¶ 11; ECF No. 2601 at 2. In November 1969, the Navy issued a formal military specification for AFFF, MilSpec Mil-F-24385. ECF No. 1966-1 (hereafter, “1969 MilSpec”). At Mr. Darwin’s recommendation, the Navy converted its systems to AFFF. Darwin Decl. ¶ 20; Ex. 6 to Darwin Decl., US-Darwin-00005572 at 573. By the early 1970s, the USAF had adopted the MilSpec and converted its systems to AFFF. Darwin Decl. (Ex. D) ¶ 21; **Ex. I**, Sept. 10, 2020 Decl. of Frederick Walker (“Walker Decl.”), ¶¶ 6, 9.<sup>4</sup> Since 1969, Navy—through Naval Sea Systems Command, “NAVSEA”—has administered the AFFF MilSpec on behalf of the DoD. ECF No. 2601 at 3. Robert Darwin worked with and oversaw the MilSpec for roughly 30 years, until his retirement in 1998. Darwin Decl. (Ex. D) ¶¶ 17–26.

AFFF was superior to protein-based foam for several reasons, including the substantially shorter time AFFF takes to extinguish fuel fires. *See, e.g.*, Darwin Decl. (Ex. D) ¶¶ 12, 20; Walker Decl. (Ex. I) ¶¶ 3, 11; **Ex. E**, Jan. 12, 2023 Decl. of Armando Eversley, Jr. (“Eversley Decl.”) ¶¶ 8, 11; **Ex. J**, Jan. 13, 2023 Decl. of John W. Wilkus (“Wilkus Decl.”) ¶ 5.<sup>5</sup>

### **III. Before 2016, the Military Used AFFF Without Any Mandatory and Specific Restrictions Imposed by Either Military or Environmental Policy.**

AFFF was a critical tool for military firefighters. Frederick Walker, who served as the USAF’s Chief Fire Protection Engineer for more than two decades, explained:

AFFF is essential for protecting the lives of highly trained military pilots, aircrew, and flight maintenance personnel; protecting firefighters who must walk into the foam over the burning fuel while applying AFFF; protecting multimillion dollar aircraft and vital military command and control equipment, and avoiding the detonation of

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<sup>4</sup> Mr. Walker’s 40-year tenure with the USAF (beginning in 1978) encompassed multiple roles, including—from 1987 until December 2014—the role of Chief Fire Protection Engineer for the USAF. Walker Decl. (Ex. I) ¶ 1.

<sup>5</sup> Chief Eversley currently serves as the Chief of Fire Protection and Emergency Services for the United States Army. His career as a firefighter with the military began in 1996. Eversley Decl. (Ex. E) ¶ 1. Chief Wilkus currently serves as the Chief Fire Protection Engineer for the Army Corps of Engineers and the lead Fire Protection Engineer for the Army. Wilkus Decl. (Ex. J) ¶ 1.

ordnance and munitions. Many times in a crash, a military pilot cannot self-rescue, and rescue personnel and firefighting personnel have to be able to move quickly to safely rescue the pilot and aircrew from a burning plane. In addition, advanced aircraft built with composite materials require extinguishment of fires within one minute in order to avoid “burn-through” or loss of stealth capability of the fuselage. Furthermore, aircraft often carry ordnance and munitions that cannot be exposed to ultra-high temperature fires without devastating consequences.

Walker Decl. (Ex. I) ¶ 8. Similarly, John Wilkus (who currently serves as the Army’s Chief Fire Protection Engineer), explains: “AFFF has been, in my experience, a vital tool that the Army has used to protect life, assets, and facilities, and [to] promote the Army’s readiness to carry out its military missions.” Wilkus Decl. (Ex. J) ¶ 26.

Until 2016, neither military nor environmental policy limited any form of the military’s use and handling of AFFF based upon matters relating to human health. Walker Decl. (Ex. I) ¶ 51 (“At no time during my tenure in the USAF from 1978 through my retirement in 2014 was there any USAF regulation or environmental rule or guideline forbidding the USAF from using legacy AFFF or requiring the USAF to treat it as a hazardous substance for purposes of disposal.”); Ex. 16 to **Ex. H**, Sept. 9, 2021 Decl. of Jeffrey Wagner (“Wagner Decl.”), AF02-000002524 (Deputy Assistant Secretary of the Air Force stating in 2017 that, “existing statutes or regulations largely do not address how to manage wastes derived from PFOS/PFOA releases”); *accord* Ex. 10 to Eversley Decl. (Ex. E), FF\_ARM02\_00011975 at 975 (explaining Army understanding as of June 2017 that “AFFF is not considered a hazardous waste and is not required to be treated as such during disposal”). In May 2016, after years of study and testing, the EPA published a *non-binding* Lifetime Health Advisory (“LHA”) for PFOS and PFOA in drinking water. ECF No. 2601 at 21 (Order of Denial on Government Contractor Defense). “In direct response [to the LHA,]” DoD “began taking actions.” *Id.* at 22. Specifically:

- In 2016, the Air Force encouraged the development of better fire training facilities and

techniques to minimize releases of AFFF, which had, by this time, occurred for several decades. Wagner Decl. (Ex. H) ¶ 21. In 2019, the DoD banned training with AFFF outright. *Id.* ¶ 22.

- In 2016, the Air Force restricted mandatory fire equipment testing with AFFF (which had similarly occurred for decades), by mandating the use of a new testing system that did not release AFFF into the environment. *Id.* ¶¶ 21–22.
- Also in 2016, the Air Force directed removal of “PFOS/PFOA-containing stocks” of AFFF for replacement with a new, “C-6-based AFFF” stock.<sup>6</sup> Ex. 14 to Wagner Decl. (Ex. H), AF02-000003611 at 3612 (¶ e). The 2016 policy further provided that the Air Force would “treat all releases of PFOS/PFOA-containing AFFF in the same way as a hazardous materials response.” *Id.* at 3612–13 (¶ h).
- In 2019, the Air Force issued its first detailed Guidance Memorandum on Waste Disposal Practices. Ex. 17 to Wagner Decl. (Ex. H), AFGM2019-32-01, FF\_AF09-00131305; Wagner Decl. ¶ 23. Among other things, when more was known about the new C-6 product, the 2019 Air Force Guidance Manual (“AFGM”) required that C-6 AFFF be handled and treated the same as legacy, C-8 AFFF. *See* Ex. 17 to Wagner Decl. (AFGM2019-32-01) FF\_AF09-00131305 at 307.
- In 2021, the Air Force issued a “Sundown Policy,” which called for the removal of all types of foam from all hangar fire-suppression systems. *See* Ex. S, USAF “Sundown Policy for Foam Fire Suppression Systems” (Nov. 16, 2021), FF-AF28-00001932; *see also* Wilkus Decl. (Ex. J) ¶ 25.

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<sup>6</sup> C-6 was supposed to be safer for the environment because it contained a shorter carbon chain. Walker Decl. (Ex. I) ¶ 58; Wagner Decl. (Ex. H) ¶ 25; Eversley Decl. (Ex. E) ¶ 22.

The absence of military restrictions on the use and handling of AFFF before the 2016 LHA is unremarkable. DoD personnel testified that they were not aware that AFFF contained any PFOS and PFOA until 1998 at the earliest. ECF No. 2601 at 13 (Order of Denial on Government Contractor Defense); *see* ECF No. 2063-51 (3M’s May 15, 1998 Toxic Substances Control Act Submission to EPA, 3M\_BELL02796621); *see also, e.g., Ex. C*, Sept. 23, 2021 Decl. of Curtis M. Bowling (“Bowling Decl.”), ¶ 8 (DoD); Darwin Decl. (Ex. D) ¶¶ 35–36 (Navy); *Ex. F*, Apr. 30, 2021 Decl. of John Farley (“Farley Decl.”), ¶¶ 19–20 (also Navy—NRL); Walker Decl. (Ex. I) ¶¶ 31–33 (USAF).<sup>7</sup> There existed no means of even detecting PFAS in the environment until 1999, when a crude form of testing became available. *See, e.g.,* ECF No. 2347-58 (Cheryl A. Moody & Jennifer A. Field, *Determination of Perfluorocarboxylates in Groundwater Impacted by Fire-Fighting Activity*, 33 Env’t Sci. & Tech. 2800, 2806 (1999), FF\_NAVY13\_00023113 at 114 (“Virtually nothing is known about the occurrence of perfluorinated surfactants in the environment, in particular, at fire-training areas and emergency response sites where AFFF entered groundwater without prior treatment.”). From the 1970’s through the 1990s, the military’s concerns regarding AFFF releases into the environment did not relate to human health, but rather, related to the impact of **excess foaming** on “fish toxicity, biodegradability, treatability in wastewater treatment plants, and nutrient loading.” Darwin Decl. (Ex. D) ¶¶ 29, 36; Ex. 9 to Darwin Decl., US-Darwin-00000074 at 142; *see also, e.g., Ex. L*, Dep. Tr. of Frederick Walker (“Walker Dep.”), 140:11–141:18; 386:17–387:21.

Given AFFF’s criticality in effectively fighting fires, and in the absence of any environmental regulations regarding releases of PFAS or AFFF, the military decided to use

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<sup>7</sup> From 2001 until his retirement in January 2013, Curtis Bowling served as the Assistant Deputy Undersecretary of Defense for Force Protection. Bowling Decl. (Ex. C) ¶ 1. John Farley is NRL’s Director of Fire Test Operations. Farley Decl. (Ex. F) ¶ 1.

AFFF for firefighting in four key respects before 2016: (1) fire training; (2) fire-suppression systems in hangars; (3) fire emergency responses; and (4) fire preparedness testing. Darwin Decl. (Ex. D) ¶¶ 27–28, 48; *see also* Walker Decl. (Ex. I) ¶ 12.

**A. The Military Used AFFF for Live Fire Training.**

Because jet fuel fires “do not involve the same heat, burning process, or technologies for extinguishment as a controlled propane burn in training,” military fire fighters have always “need[ed] experience applying AFFF.” Wagner Decl. (Ex. H) ¶ 17.<sup>8</sup> Therefore, far from *prohibiting* the use of AFFF in live fire training exercises, military regulations since the 1970s have *necessitated* that fire training be “as realistic as possible,” and—until the mid-1980s—specifically required the military to use jet fuel as an accelerant. Ex. 7 to Walker Decl. (AFR 92-1 (Dec. 1, 1988), AF10-00000042 at 52 (§ 1-21) & 62 (§ 3-7(e)); Walker Decl. (Ex. I) ¶¶ 21–22.<sup>9</sup> The policy reason for these realistic exercises using jet fuel was to “reinforce the ability to perform and the courage to act on tasks essential to fire fighting and rescue.” Ex. 7 to Walker Decl. (Ex. I), AF10-00000042 at 61 (§ 3-7(a)); Walker Decl. ¶ 18 (“No USAF regulation or ETL limited the disposal of AFFF used at fire training areas.”); *id.* ¶¶ 14, 21–22; Eversley Decl. (Ex. E) ¶ 18 (“The Army has also required live fire training.”).

The overwhelming majority of releases of AFFF into the environment—*i.e.*, the releases specifically identified in the FTCA Complaints—occurred during fire training exercises. *See, e.g.*, Walker Decl. ¶ 12; Walker Dep. (Ex. L), 115:2–5 (estimating that 90% of the Air Force’s

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<sup>8</sup> Mr. Wagner was the USAF Fire Chief until his retirement in 2021. Wagner Decl. (Ex. H) ¶ 1.

<sup>9</sup> AFR 92-1 “establishe[d] Air Force policy governing the fire protection program to prevent fire and reduce loss from fire to personnel, property, material, and aerospace vehicles.” Ex. 7 to Walker Decl. (AFR 92-1), AF10-00000042 at 42. AFI 32-2001 later superseded AFR 92-1 but did not substantively change the military’s guidance regarding fire training. Walker Decl. (Ex. I) ¶ 22; *see* Exs. 8 and 22 to Walker Decl., § 3.2 (in the 1994 and 1999 versions of AFI 32-2001, respectively).

AFFF was used in training exercises through the 1980s). This is because, at least until the mid-1980s, military installation firefighters trained by setting jet fuel fires in large unlined pits and then extinguishing them with AFFF. Walker Decl. (Ex. I) ¶¶ 15–16; Bowling Decl. (Ex. C) ¶ 9. The FTCA Complaints primarily (some instances, exclusively) challenge the military’s decision to conduct live fire training with AFFF over the course of several decades. *See, e.g., Lakewood Water Dist. v. United States*, No. 2:20-cv-02899, ECF No. 1 ¶ 156 (Compl. filed July 16, 2020) (claiming water supply contamination near Joint Base Lewis-McChord, in Washington State, due to fire training that occurred twice-monthly for 30 years, allegedly releasing 7.2 million gallons of finished AFFF in the area); *City of Dayton v. United States*, No. 2:21-cv-02627, ECF No. 1 ¶ 9 (Compl. filed May 3, 2021) (alleging that “thousands of gallons of PFAS-containing AFFF concentrate” were “used for decades” in “regular firefighting training exercises” at Wright-Patterson AFB in Ohio); **Ex. N**, Excerpt of Mar. 18, 2022 Rep. of Plaintiffs’ Expert Dr. Christopher Higgins (offered in Bellwether Discovery in suits against the Manufacturers), at 22 (“In a recent study of PFAS occurrence in 254 wells across the eastern U.S., proximity to a fire training area was the second strongest predictor of the detection of PFASs in groundwater.”).

In the 1990s, two changes to fire training had the incidental effect of reducing the quantity of AFFF released into the environment. *First*, concerns over the chemical constituents in jet fuel led the Air Force to redesign its fire-training areas. Walker Decl. (Ex. I) ¶¶ 18, 19, 21; Bowling Decl. (Ex. C) ¶ 9. The Air Force developed a double-liner system for fire training areas so that chemicals were no longer directly leached into the ground, as they had been for the roughly two decades prior. Walker Decl. (Ex. I) ¶¶ 22, 24; *accord* Wagner Decl. (Ex. H) ¶ 19. *Second*, the Air Force decided to use propane gas (instead of jet fuel) in “controlled” burn training scenarios—a shift that meant, in many cases, training with water instead of with AFFF.

Walker Decl. (Ex. I) ¶ 23; Wagner Decl. (Ex. H) ¶ 16; *accord* Eversley Decl. (Ex. E) ¶ 13 (from the mid-1990s to 2016, “the Army overwhelmingly conducted its fire training using propane and water . . . to avoid having hydrocarbons in jet fuel leak into the ground”). Nevertheless, training with AFFF was unconstrained until 2016, when Facilities were advised to “initiate new and/or improved fire-fighting and facility-related training, tactics, techniques, technology and procedures, including facility design and construction, to mitigate or eliminate the release of AFFF to the environment.” Wagner Decl. (Ex. H) ¶ 21. The DoD banned training with AFFF completely in 2019. *Id.* ¶ 22.

**B. The Military Used AFFF in Fire-Suppression Systems in Certain Hangars.**

The use of AFFF in hangar fire-suppression systems is another source of AFFF reaching the environment. Because aircraft in hangars may be carrying ordnance—and regardless, fire poses a grave risk to both equipment and Air Force personnel—all hangars are designed with fire-suppression systems. Certain fire-suppression systems in military hangars historically contained AFFF. *E.g.*, Walker Decl. (Ex. I) ¶¶ 12, 35; *see also* Wilkus Decl. (Ex. J) ¶¶ 15, 25.

During the relevant timeframe, AFFF may have been released from hangar fire-suppression systems in one of three ways: (1) in the event of a fire emergency (which would activate the systems to distribute foam solution through sprinklers or nozzles); (2) during intentional testing of fire-suppression systems for functionality; and (3) due to unintentional releases (“false activations”). Walker Decl. (Ex. I) ¶¶ 12, 37–40; Walker Dep. (Ex. L) 374:15–375:21; *see also, e.g.*, **Ex. O**, Unified Facilities Criteria (2010), US-Darwin-00007784, § 3-601-02, Table 2-11 (testing at least every two years). False activations were a known concern, as reflected in a 2016 presentation by Chief Fire Protection Engineer Frederick Walker. **Ex. P**, *Aircraft Hangar Fire Protection, DoD and USAF Perspective* (May 5, 2016), AF09-00041620

(Slides 9–10). Plaintiffs appear to have focused on the false activations. *See, e.g.*, ECF No. 2925 (Mar. 24, 2023 letter from PEC), at 3 (asserting that “multiple plaintiffs have asserted FTCA claims for contamination resulting from accidental spills, leaks, or releases of AFFF”).

The USAF’s Chief Fire Protection Engineer, Frederick Walker, drafted and co-authored several Engineering and Technical Letters (“ETLs”) that addressed the military’s response to activations of AFFF in hangar systems. The military took the same steps in response to activations of AFFF, regardless of whether the activations were inadvertent or intentional. *See* Walker Decl. (Ex. I) ¶ 20 (discussing ETL 86-8 (June 4, 1986), Ex. 6 to Walker Decl.); Walker Decl. ¶ 27 (discussing ETL 96-1 (Jan. 22, 1996), Ex. 12 to Walker Decl.); Walker Decl. ¶ 28 (discussing ETL 1110-3-481 (Mar. 31, 1997), Ex. 14 to Walker Decl.); Walker Decl. ¶ 29 (discussing ETL 98-7 (Apr. 29, 1998), Ex. 15 to Walker Decl.). At the time of the 1997 ETL, which applied to both the Army and the Air Force, the ETL stated that, “little information on this subject and no specific design guidance” existed that provided “a reasonable approach to handling AFFF discharges.” Walker Decl. ¶ 28 (quoting ETL 1110-3-481); *see also* Wilkus Decl. (Ex. J) ¶ 16. The available options included: metering to a WWTP; the use of earthen retention ponds, containment trenches, or solar evaporation ponds; and “flowing sewers.” *E.g.*, Ex. 14 to Walker Decl. (ETL 1110-3-481), at A-12-A14, §§ 7.1, 7.1.1, 7.2; Wilkus Decl. (Ex. J) ¶ 17 (discussing the same ETL). The ETL also noted that, due to cost, transport to an off-site treatment facility “should only be considered as a last resort.” Ex. 14 to Walker Decl. (ETL 1110-3-481), at A-14, § 7-4.

The method of disposal for releases of AFFF from hangars was a decision delegated to the individual installations, each of which were “encouraged to consider other innovative methods and systems as may be deemed appropriate for each specific application.” Ex. 14 to



Walker Decl. (ETL 1110-3-481), at A-10, § 6.<sup>10</sup> Notably, however, the military’s “primary concern” before the 2000s related to *excess foaming*, which could affect the wastewater treatment systems that typically received wastewater from hangars. Ex. 14 to Walker Decl. (ETL 1110-3-481) § 3(b); *id.* § 3-6 (USAF and Army understanding in 1997 was that AFFF was “considered biodegradable and non-toxic” but large volumes of foam can impact water treatment systems); Walker Decl. ¶ 26; Darwin Decl. (Ex. D) ¶¶ 29, 36; Ex. 9 to Darwin Decl., US-Darwin-00000074 at 142; *see also, e.g.*, Walker Dep. (Ex. L) 140:11–141:18; 386:17–387:21. “Foaming” was not—and is not—federally regulated. *See, e.g.*, 40 C.F.R. § 143.1 (SDWA, explaining that regulations concerning contaminants affecting the “aesthetic qualities” of drinking water, such as foaming agents, “are not Federally enforceable”). Moreover, the guidelines concerning foaming are not specific. *E.g., id.* § 143.4 (non-specific guidelines regarding “aesthetic qualities” of water).

Through the 1990s, Air Force guidance “allowed individual Air Force Bases discretion on how and where to contain the discharge from hangar fire protection systems.” Walker Decl. (Ex. I) ¶ 27; *id.* ¶ 29 (Air Force policy gave bases discretion how to handle “unplanned accidental AFFF discharges”). After more scientific information became available in the 2000s, the military began to consider waste disposal measures designed to address concerns over exposure to PFAS (as opposed to excess foaming). The military retained discretion regarding how to dispose of AFFF released from hangars, including “spills.”

As more became known about PFAS in the 2000s, the Air Force began to make incremental changes in its use and handling of AFFF, but still retained discretion. In 2015, for

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<sup>10</sup> In 1998, the bases were told that “foam water retention systems were “not required” if there was “little or no open water” and “no high-ground water table. (Solar evaporation is an appropriate disposal method in these areas.)” Ex. 15 to Walker Decl. (ETL 98-7), § A1.2.5.

example, Air Force regulations allowed for the continued use of wastewater treatment systems for disposal of AFFF waste, but also authorized the costly option of off-site treatment of the AFFF as a “hazardous waste,” *if* the WWTP would not accept the AFFF. *See* Wagner Decl. (Ex. H) ¶ 20; Ex. 13 to Wagner Decl. (Air Force Instruction 32-1067 (February 4, 2015), on “Water and Fuel Systems”). In December 2017, the Deputy Assistant Secretary for the Air Force Office of Environment Safety and Infrastructure expressly observed that, “existing statutes or regulations largely do not address how to manage wastes derived from PFOS/PFOA releases” and directed the USAF to “develop implementation guidance.” Ex. 16 to Wagner Decl. (Ex. H), AF02-000002524 at 524 (Memo. Re: “Managing AFFF-related perfluorooctane sulfonate and perfluorooctanoic acid (PFOS/PFOA) Waste”).

In 2019, the USAF issued guidance that, for the first time, addressed waste management issues related to PFAS in AFFF, beyond wastewater. *See* Ex. 17 to Wagner Decl. (AFGM 2019-32-01), FF\_AF09-00131305 at 1305 (AFGM characterizing itself as the “first instance” of guidance that considered PFAS in various aspects of waste management). AFGM 2019-32-01 provided that certain AFFF liquid releases would be pretreated prior to disposal, applying the EPA’s non-regulatory LHA. *Id.* Military discretion, while cabined by the 2019 AFGM, remained. *See* **Ex. Q**, Apr. 7, 2022 DoD Memo. re “Accidental [AFFF] Releases/Spills on Military Installations and National Guard Facilities,” FF\_DOD17\_00002597 (accidental AFFF spills are to be cleaned up “to the extent practicable[ ]”).

The Air Force’s discretionary decision to use AFFF in hangar fire-suppression systems, and how to dispose of AFFF when released, was laden with policy considerations and judgments. A key factor was the risk profile of the weapons systems on the aircraft in a given hangar. For example, a fire may be particularly devastating if it causes a plane’s weapons to detonate.

Certain weapons that military aircrafts carry generate more explosive force than others, potentially jeopardizing not only the aircraft itself but also the hangar and even the neighboring community beyond the installation. Walker Dep. (Ex. L) 338:1–340:3.

Beginning in the 1970s, the Air Force deliberately chose to use AFFF in certain hangars despite knowing the risk of false activations. In 1975, for example, the Air Force conducted a risk assessment and opted to use AFFF along with use of “highly sensitive, rapidly responding detectors for actuating systems,” carrying the “potential for an accidental discharge.” **Ex. R**, L.M. Krasner, *et al.*, *Fire Protection of Large Air Force Hangars*, Air Force Sys. Command (Nov. 24, 1975), DOD06-00017344 at 389, § 6.5. The Air Force was aware of and considered *both* false activations and then-known environmental risks associated with such releases (excess foam). *Id.* at 390, § 7.1. In the end, and after considering other alternatives, the USAF decided to use AFFF because it considered AFFF—coupled with the sensitive detectors in hangars—to be “essential to achieving the design purpose” of the hangar systems, and because it understood the risks associated with AFFF releases to be temporary and unrelated to human health or safety. *Id.* at 389–90, §§ 6.5, 7.1.

The USAF in particular has documented its continual reassessment of the policy use of AFFF in hangar fire-suppression systems. In 1998, for example, the Air Force conducted a second risk assessment of hangar fire suppression systems when it switched the type of jet fuel it was using. Walker Decl. (Ex. I) ¶ 30; Ex. 16 to Walker Decl. (1998 risk assessment), AF09-00040958. Since the new jet fuel burned slowly, the Air Force decided that it could use High Expansion Foam (“HEF,” also commonly referred to as HX), which has a slower response time than AFFF, in new hangar construction projects going forward. Ex. 16 to Walker Decl., AF09-00040958 at 958, ¶ 3(b) (“The analysis quantified the lower ignition potential and slower fire

growth rate of JP-8 and concluded that less aggressive fire protection systems could be used.”).<sup>11</sup> It made the decision, based on knowledge available at the time, after weighing “construction costs, environmental requirements, maintenance requirements and loss potential.” *Id.* ¶ 3(c); *see also* Wilkus Decl. (Ex. J) ¶ 13 (Army decisions regarding choice between HEF and AFFF in hangars “involved several considerations, including the health and safety of personnel, protection of the environment, and cost comparisons”). The USAF revisited its use and handling of AFFF in hangars again in 2015. *See generally* **Ex. T**, May 28, 2015 AFCEC Presentation by Judy Biddle re: “Hangar Fire Suppression Evaluation,” AF04-00772726. Some installations had opted to remove the delicate sensors for manually controlled fire suppression systems, in a (successful) attempt to reduce the incidence of false activations. *Id.*, Slide 9. However, bodies of newer aircraft were constructed with highly flammable skins that required a 60-second response time. As the 60-second response time could not be met during off duty hours using a manually activated system, the USAF advocated to return to delicate sensors, depending upon the hangar’s risk profile. *Id.*

Finally, in 2021, when more scientific information was available regarding PFAS and EPA had taken significant steps toward regulating PFAS in the future, the USAF began the process of removing all types of foam from nearly all hangars and replacing it with a water deluge system. **Ex. S**, USAF Sundown Policy, FF-AF28-00001932. There were notable exceptions to this policy, including the Andrews AFB hangar that houses Air Force One, and the Boling AFB hangar that houses Marine One. *See Ex. DD*, Seth Robson, *Air Force Shuts Down Hangar Fire Suppression Systems over PFAS Concerns*, Stars and Stripes (Mar. 7, 2023), at 2

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<sup>11</sup> While the military did not know about PFAS at the time, HEF foam does not contain PFAS. Walker Decl. (Ex. I) ¶ 30. The Army also transitioned to HEF foam in new hangar fire-suppression systems, beginning in 2014. Wilkus Decl. (Ex. J) ¶ 14.

(“The Air Force is shutting down AFFF fire-suppression systems at all its hangars except four ‘mission critical’ facilities where AFFF systems will remain in place.”). To this day, “mission critical” hangars contain AFFF. Although the Army has prohibited the use of AFFF in *new* hangars, as of January 2023, 146 of the Army’s hangars still used AFFF. Wilkus Decl. (Ex. J) ¶¶ 23, 25.

**C. Even Today, the Military Uses AFFF in Emergency Responses.**

The military continues to use AFFF in response to fuel fire emergencies. Ex. Q (Apr. 7, 2022 OSD Memo.); *see also* Walker Decl. (Ex. I) ¶ 18 (“No USAF regulation or ETL limited the disposal of AFFF used at . . . emergency response areas.”). In addition, the military continues to use AFFF on fuel fires on private property that local communities cannot otherwise control. *See, e.g.*, Wagner Decl. (Ex. H) ¶ 11 (discussing the Air Force answering the distress call from the City of Albuquerque, New Mexico and releasing 1,300 gallons of AFFF to extinguish a fire on private property); *see also* Eversley Decl. (Ex. E) ¶ 12 (“Army fire personnel use AFFF to extinguish fires during emergencies not only on Army bases but also under mutual aid agreements with State and local fire departments near Army bases.”).

Because emergency responses to fires tend to be chaotic (by definition), addressing PFAS foams expended in these circumstances has been, and remains, more difficult. Ex. 15 to Walker Decl. (ETL 98-7), AF02-000004157 at 4166, § A1.2.5 (“Designing a containment system for a catastrophic event is impractical due to the number of associated variables and the mass of fire debris generated.”). The first time *any* mention of post-crash cleanup of AFFF was addressed by DoD was on April 7, 2022, in a memorandum providing that cleanup of AFFF at crash sites would be treated like a spill and would be cleaned “to the extent practicable.” Ex. Q.

**D. The Military Used AFFF in Equipment Testing for Preparedness.**

None of the FTCA Complaints identify particular harms allegedly caused by the testing of equipment containing AFFF. However, for completeness, the United States addresses this category of use here. *See* Walker Decl. (Ex. I) ¶ 12 (explaining that USAF’s Aircraft Rescue and Firefighting (“ARFF”) truck testing was performed annually to make certain that crash trucks were properly mixing foam with water and were able to deploy it in the event of an emergency); *accord* Eversley Decl. (Ex. E) ¶ 16 (“The Army’s ARFF equipment testing schedule that I have overseen as Deputy Chief and Chief has required the testing of ARFF vehicles foam delivery systems in accordance with the manufacturers’ recommendations and at least annually.”).

As with fire training, releases of AFFF into the environment occurred during equipment testing on or near military installations—particularly, during nozzle tests (which “usually consisted of opening nozzles for a minute or less and spraying a small amount of foam on a taxiway”). Wagner Decl. (Ex. H) ¶ 15. Also similar to fire training, equipment testing is fundamental to firefighting preparedness. As Fire Chief Wagner explained,

Testing of ARFF trucks and related equipment is vital to validate that foam concentrate is being proportioned with water at the right level. It is also important to exercise proportioning systems and valves during testing to ensure that they are moving as intended and will perform as expected when a real emergency occurs. In addition to annual, or often quarterly, testing of foam delivery equipment on crash trucks, any time a crash truck was serviced, its foam delivery capabilities were tested.

*Id.*; *see also* Eversley Decl. (Ex. E) ¶ 17 (“It is important to test ARFF trucks to ensure that the equipment delivers the agent as intended, is correctly proportioned, and is uncontaminated by any foreign substance.”).

Until 2016, military regulations allowed the release of AFFF during equipment testing and—like fire training—*required* that the equipment be tested periodically. *See, e.g.*, Walker

Decl. (Ex. I) ¶ 41 (“Through at least my retirement in 2014, the USAF had no regulations concerning collection of AFFF effluent from firetruck testing.”); *id.* ¶ 14 (discussing training required by AFR 92-1, which is at Ex. 4 to Walker Decl.); *accord* Eversley Decl. (Ex. E) ¶ 17 (“To my knowledge, prior to 2016, no DoD or Army provision limited or prohibited testing AFFF in the Army’s ARFF vehicles.”). The method of disposal of AFFF upon completion of testing was left to the discretion of the installation. *E.g.*, Wagner Decl. (Ex. H) ¶ 15; *accord* Walker Dep. (Ex. L) 110:13–112:2. In 2016, the military deployed new foam testing equipment (Eco-Logic carts) that were a “closed-system” (meaning, they did not release AFFF into the environment). Wagner Decl. (Ex. H) ¶¶ 21–22, 25; Ex. 14 to Wagner Decl., Memo. re: “SAF/IE Policy on Perfluorinated Compounds (PFCs) of Concern,” AF02-000003611; **Ex. BB**, AFCEC PFC Program Review (Oct. 19, 2016), AF001-00331906 (Slide 23); Walker Decl. (Ex. I) ¶ 59.

#### **IV. EPA Began Studying the Potential Human Health Effects of PFAS in 2000 but Did Not Take Steps to Regulate the Use and Handling of AFFF Until Much Later.**

EPA’s involvement in researching health impacts of exposure to AFFF began in 2000, when the 3M Company announced that it was withdrawing its PFAS chemical—PFOS—from the market. *See* Walker Decl. (Ex. I) ¶¶ 32, 34. Former Assistant Deputy Undersecretary of Defense Curtis Bowling recalls that military firefighters were “panicked” by the prospect that EPA would ban AFFF, “which would negatively impact force readiness and safety.” Bowling Decl. (Ex. C) ¶ 12. At meetings with representatives from each military branch in 2001, EPA indicated that it “was still studying” the chemicals, that the military could continue to use its stocks, and that “any regulation of these chemicals by EPA was still several years away.” *Id.* ¶¶ 13, 15–16, 18.

On August 3, 2000, EPA presented information to DoD about the risk-benefit analysis it would conduct under then-existing law, prior to deciding whether and how to regulate AFFF

containing PFAS. *See* Ex. U, Aug. 3, 2000 Dominiak Presentation, Penna-Navy-011648 at 663; Walker Decl. (Ex. I) ¶ 34 (explaining that, after attending several meetings with EPA in 2001, he understood that “the science regarding the effects of PFOS and PFOA on human beings was still developing; and EPA did not know what any appropriate levels should be”). DoD made the decision to defer to EPA’s guidance as it developed in the future. Bowling Decl. (Ex. C) ¶¶ 23, 27. EPA’s research continued over several years. In the meantime, the military decided to continue to use AFFF, “because of the unrivaled effectiveness of legacy AFFF in fighting fires, the importance of saving lives, and protecting military resources; the EPA’s decision not to propose any limit on the use of legacy AFFF; and an agreement by foam manufacturers with the EPA to develop new foam products.” Walker Decl. (Ex. I) ¶ 36; *id.* ¶ 43.

In a 2011 “Risk Alert,” DoD informed the branches that EPA had approved pre-manufacture notices for the 6-carbon chain chemistry (C-6), and that EPA “considers the shorter chain compounds to have lower bioaccumulation potential and toxicity than the longer chain PFCs used in legacy AFFF.” Ex. 25 to Walker Decl. (Ex. I), AF02-000002636 at 2638. EPA had recently approved C-6 AFFF, and it was being tested against the MilSpec standards; once that was completed, the military began the expensive, multi-year process of switching to the new C-6 AFFF. Walker Decl. (Ex. I) ¶ 58; Wagner Decl. (Ex. H) ¶ 25; Eversley Decl. (Ex. E) ¶ 22.

#### **A. The DoD Relied on EPA Before It Took Actions Related to PFAS.**

The DoD waited for EPA to conduct national water sampling, evaluate the science, and make regulatory determinations related to PFAS. The SDWA authorizes EPA to set national health-based standards for drinking water to protect against contaminants. Relevant here, SDWA requires EPA periodically to disseminate lists of *unregulated* contaminants to be monitored by certain large public water systems. In 2012, for the first time, EPA included PFOS and PFOA on its list of unregulated contaminants for monitoring, which meant that certain large



water systems were required to gather data on PFOS and PFOA occurrence to inform EPA's future determinations as to whether regulation would be necessary. *See Revisions to the Unregulated Contaminant Monitoring Rule (UCMR 3)*, 77 Fed. Reg. 26072-01 (May 2, 2012), at Ex. 2A to the Rule; **Ex. V**, EPA Fact Sheet on UCMR 3, at 1. PFOS and PFOA were then tested in certain water systems between 2013 and 2015.

In 2016, based on its assessment of the best available peer-reviewed science, EPA published an SDWA LHA for PFOS and PFOA, of 70 PPT. ECF No. 2601 at 21 (Order of Denial on Government Contractor Defense); Walker Decl. (Ex. I) ¶ 56. LHAs are non-enforceable, non-regulatory contaminant levels below which no adverse health effects are expected over a lifetime of drinking water exposure. *See EPA, Health Advisories*, <https://www.epa.gov/sdwa/drinking-water-health-advisories-has> (explaining that Health Advisories “are not to be construed as legally enforceable federal standards and are subject to change as new information becomes available”); *see also* 42 U.S.C. § 300g-1(b)(1)(F) (SDWA providing that, for unregulated contaminants, EPA “may publish health advisories (which advisories are not regulations) or take other appropriate actions for contaminants not subject to any national primary drinking water regulation”).

The DoD chose to rely on EPA guidance in addressing PFAS. Bowling Decl. (Ex. C) ¶¶ 23, 27. As explained in a July 22, 2021 DoD Inspector General's (“IG”) Report, the DoD was aware of EPA's evolving concerns about PFAS (reflected in the 2011 Risk Alert), but DoD “did not require proactive risk management actions for PFAS-containing AFFF until 2016” when EPA issued the LHA. *See* ECF No. 1802-1 (DoD IG Report, Re: “Evaluation of the Department of Defense's Actions to Control Contaminant Effects from Perfluoroalkyl and Polyfluoroalkyl Substances at Department of Defense Installations”). Until the DoD made PFAS subject to “risk

management action” in 2016, “DoD officials were not required to plan, program, and budget for any actions in response to the 2011 risk alert.” ECF No. 1802-1 at 3–4. Plaintiffs’ expert Dr. Linda Birnbaum, testifying in the bellwether cases against the manufacturers, agrees that “the policy of DOD is not to take action until there is a formal EPA risk assessment.” **Ex. FF**, Dep. Tr. of Linda Birnbaum 213:24–214:3. She continued:

I believe that prior to the release of the lifetime health advisory in 2016, DoD was not fully aware of the potential risks that could occur from PFOA and PFOS, and that once there was a formal completed risk assessment, which was what was promulgated in the health advisory, DOD then began action.

*Id.* 213:2–15.

**B. The Military Decided to Exercise Its Discretion to Evaluate and Clean Up PFAS from Its Installations, and Surrounding Groundwater, Using the CERCLA Process.**

PFOS and PFOA are not currently designated as “hazardous substances” under CERCLA, meaning that in order to exercise its cleanup authority, the government first has to find that these substances “may present an imminent and substantial danger to the public health or welfare.” 42 U.S.C. § 9604(a)(1). EPA proposed to list PFOS and PFOA as hazardous substances in August 2022. ECF No. 2563. But long before that, the DoD *voluntarily* took early steps to initiate a CERCLA process by starting to identify locations where PFOS and PFOA may have been discharged and affirmatively determining that these substances “may present an imminent and substantial danger” under CERCLA. **Ex. G**, Jan. 10, 2024 Decl. of Alexandria Long (“Long Decl.”), ¶¶ 16, 19.<sup>12</sup> The Services have since undertaken comprehensive

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<sup>12</sup> The Environmental and Natural Resources Division (“ENRD”) is filing a separate motion to dismiss cases and claims in this multi-district litigation that challenge the DoD’s CERCLA responses. The United States has also appended the Long declaration to ENRD’s motion to dismiss pursuant to CERCLA, filed contemporaneously herewith. The United States will

assessments and cleanup activities at installations pursuant to CERCLA, and the DoD *currently* estimates spending \$9.5 billion in connection with its efforts. *Id.* ¶ 23. Some of the plaintiffs who continue to press their FTCA claims have already benefited directly from the DoD’s clean-up efforts. *Compare, e.g., Ex. W*, Security Water District’s 2018 FTCA administrative claim, ¶ 184 (seeking roughly \$15.5 million for damages to its water system water), *with* Long Decl. ¶ 106 (discussing the \$36.5 million the Air Force has spent to the direct benefit of Plaintiff Security Water District between 2019 and 2021); *see also* Long Decl. ¶¶ 34, 56, 62, 90, 107 (outlining money spent or obligated to date for other FTCA Plaintiffs). The DoD’s CERCLA work is all occurring before EPA has finalized its designation of PFAS as a hazardous substance under CERCLA that would mandate cleanup. Finally, the DoD worked to develop a new MilSpec for fluorine-free foam, which was achieved in 2023. ECF Nos. 2775, 2775-1.

**C. In March 2023—for the First Time—EPA Proposed an Enforceable Drinking Water Limit Applicable to PFOS and PFOA.**

On March 14, 2023, EPA filed a Notice of Proposed Rulemaking to set an enforceable Maximum Contaminant Level (“MCL”) for PFOS and PFOA for drinking water. *See* ECF No. 2903. While a final rule is still pending, EPA “expects” to issue guidance on disposal of PFAS waste in 2024. *Ex. X*, EPA’s PFAS Strategic Roadmap: Second Annual Progress Report (Dec. 2023), at 4. In the interim, EPA has proactively issued CWA waste disposal permit guidance to limit PFAS discharges, which include limiting AFFF discharges to storm water for actual fire emergencies only; recommending “[a]ccidental discharge minimization by optimizing operations

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discuss, in detail, DoD’s CERCLA efforts in ENRD’s motion. The United States appends the same declaration to this Motion. ENRD’s motion, and the Long declaration, outline the on-going DoD cleanup efforts related to all installations covered by these motions to dismiss, many of which have resulted in the DoD spending tens of millions of dollars to address issues raised by Plaintiffs in this MDL in their original administrative claims.

and good housekeeping practices”; diverting AFFF from storm drains; using alternative products “when available”; and testing for PFAS in effluent using various methods. *See e.g.*, **Ex. CC**, Apr. 28, 2022 EPA Mem. Re: “Addressing PFAS Discharges in EPA-Issued NPDES Permits and Expectations Where EPA is the Pretreatment Control Authority.”

The AFFF stateside program effectively came to an end with the issuance of the new fluorine free foam “F3 Milspec” issued on January 21, 2023, for use on shore-based installations. ECF Nos. 2775, 2775-1.

### PROCEDURAL HISTORY

On December 7, 2018, the Judicial Panel on Multidistrict Litigation created this MDL to centralize cases “alleg[ing] that AFFF products used at airports, military bases, or certain industrial locations caused the release of PFOA or PFOS into local groundwater and contaminated drinking water supplies.” *In re AFFF Prods. Liab. Litig.*, 357 F. Supp. 3d 1991, 1394 (J.P.M.L. 2018). Thirty complaints in this MDL name the United States as a defendant. Twenty-seven of the 30 cases against the United States involve tort claims, putatively brought pursuant to the FTCA’s limited waiver of sovereign immunity, and 25 of those 27 FTCA Complaints challenge conduct at Air Force installations. *See App’x A*. Some of the plaintiffs bringing FTCA claims have additionally brought claims under environmental statutes, such as CERCLA, the SDWA, and RCRA. Only three complaints against the United States in this MDL bring claims *exclusively* under environmental statutes, and therefore are not covered by this Motion: *Atl. City Mun. Utils. Auth. v. 3M*, No. 2:19-cv-01223; *New Jersey v. Dep’t of Defense*, No. 2:21-cv-00146; and *New Mexico v. United States*, No. 2:20-cv-02115.

Collectively, the Plaintiffs in all 27 FTCA Complaints identify the following activities involving AFFF as the basis for their tort claims against the United States: training, hangar

systems, emergencies, and equipment testing. **Ex. B**, Declaration of Annie Dou (“Dou Decl.”) ¶¶ 2–28 (summarizing allegations in FTCA Complaints). While broadly alleging that use and handling of AFFF contributed to their harms, training is by far the crux of Plaintiffs’ claims. ECF No. 2600 (Aug. 19, 2022 Hr’g on Gov’t Contractor Defense, at 84:13–15; Plaintiffs’ Lead Counsel, Mr. Douglas: “I don’t think there is any dispute that we’re talking about 90-plus percent use is in training[.]”); *e.g.*, *Vander Dussen v. 3M Co.*, No. 2:20-cv-4191, ECF No. 1 ¶ 202; *Teune v. United States*, No. 2:19-cv-03290, ECF No. 1 ¶ 5; *Schaap v. United States*, No. 2:19-cv-03288, ECF No. 1 ¶ 5; and *Dorene Dairy Gen. P’ship v. 3M Co.*, No. 2:20-cv-04263, ECF 1 ¶ 198 (all FTCA complaints concerning Cannon AFB, each alleging: “During routine training exercises, AFFF was discharged directly on the ground and/or tarmac at several fire training areas, allowing PFAS to travel to the surrounding groundwater and contaminate various water supply wells in the area.”). Approximately half of the FTCA Complaints allege that the United States’ use and handling of AFFF violated one or more federal directives, including statutes, executive orders, and military instructions. *See, e.g.*, *City of Airway Heights v. United States*, ECF No. 1 ¶ 161 (full citation available at Appendix A). The remaining half of the FTCA Complaints fail to identify any federal directive that the United States purportedly violated.

Since 2019, the United States consistently has expressed to the parties and to the Court that the Court lacks jurisdiction over the claims against it, and even shared the details of its anticipated jurisdictional arguments in both public filings and correspondence with Plaintiffs. *See, e.g.*, ECF No. 129 (Hr’g Tr. at 27:25–28:11, 29:9–17 (June 21, 2019)); ECF No. 244 (Preliminary Statement of Defenses by the United States, at 1–5 (Aug. 29, 2019)); **Ex. 1 to Ex. A**, Declaration of Haroon Anwar (July 12, 2022 letter from Frederick Gaston Hall to PEC); *see also, e.g.*, ECF No. 2684 (Nov. 2022 letter briefing regarding United States’ Motion to Dismiss

schedule). All told, the United States has produced to the Plaintiffs approximately 675,000 documents totaling more than 11,000,000 pages and offered substantial testimonial evidence from key government officials who served for the critical decades of AFFF usage. Anwar Decl. (Ex. A) ¶¶ 2–7, 10. In short, there is nothing left to discover. The record is complete.

### LEGAL STANDARD

The United States brings this Motion under Rule 12(b)(1), as a factual attack on jurisdiction. Jurisdiction is the power to make law, and the Court must assure itself of its subject-matter jurisdiction before proceeding to the merits. *Steel Co. v. Citizens for a Better Env't*, 523 U.S. 83, 93–94 (1998). “When a Rule 12(b)(1) motion challenge is raised to the factual basis for subject matter jurisdiction, the burden of proving subject matter jurisdiction is on the plaintiff.” *Richmond, Fredericksburg & Potomac R.R. v. United States*, 945 F.2d 765, 768 (4th Cir. 1991) (citing *Adams v. Bain*, 697 F.2d 1213, 1219 (4th Cir. 1982)); *see also, e.g., Kerns v. United States*, 585 F.3d 187, 192 (4th Cir. 2009). Moreover, on a factual attack, the Court “may consider evidence outside the pleadings without converting the proceeding to one for summary judgment.” *Richmond, Fredericksburg & Potomac R.R.*, 945 F.2d at 768. “The district court should apply the standard applicable to a motion for summary judgment, under which the nonmoving party must set forth *specific* facts beyond the pleadings to show that a *genuine* issue of *material* fact exists.” *Id.* (emphases added). Unlike summary judgment, on a factual attack to subject-matter jurisdiction, “the district court may decide disputed issues of fact.” *DeOrio v. United States*, 2021 WL 3856207, at \*1 (D.S.C. Aug. 30, 2021) (Gergel, J.) (quotation marks omitted); *Kerns*, 585 F.3d at 192. Finally, it is Plaintiffs’ burden to show that an unequivocal waiver of sovereign immunity exists under the FTCA and that DFE does not apply to their claims. *Welch v. United States*, 409 F.3d 646, 651 (4th Cir. 2005) (citing *Williams*

*v. United States*, 50 F.3d 299, 304 (4th Cir. 1995)). If they fail to do so, “then the claim is outside the limited waiver of immunity created by the FTCA and the district court is without subject matter jurisdiction to adjudicate it.” *DeOrio*, 2021 WL 3856207, at \*2.

Where, as here, the United States’ immunity is in question, the Motion should be resolved at the outset of litigation. *Seaside Farm, Inc. v. United States*, 842 F.3d 853, 861 (4th Cir. 2016) (“The value of any kind of immunity, applied here as a jurisdictional bar, declines as litigation proceeds.”); *see also Steel Co.*, 523 U.S. at 94–95.

## ARGUMENT

The Discretionary Function Exception—the FTCA’s “most important” exception—is expansive. *McMellon v. United States*, 387 F.3d 329, 335 (4th Cir. 2004) (en banc). To defeat the DFE in this case, Plaintiffs must prove that the military’s use and handling of AFFF violated a *mandatory* and *specific* federal directive, or that the military’s use and handling of AFFF was not policy-based. Plaintiffs cannot prove either. The Motion to Dismiss should be granted.

### **I. The FTCA’s Discretionary Function Exception Is Expansive.**

As a sovereign nation, “the United States is immune from all suits against it absent an express waiver of its immunity.” *Welch*, 409 F.3d at 651 (citing *United States v. Sherwood*, 312 U.S. 584, 586 (1941)).<sup>13</sup> And, “[a]s a general rule, the United States is immune from claims for money damages in civil suits.” *Blanco Ayala v. United States*, 983 F.3d 209, 214 (4th Cir. 2020). “The FTCA effects a limited waiver” of this immunity, *Welch*, 409 F.3d at 651, for “personal injury or death caused by the negligent or wrongful act or omission of any employee of

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<sup>13</sup> In this MDL, Fourth Circuit precedent governs the interpretation of federal law (such as the FTCA). *Belmora LLC v. Bayer Consumer Care AG*, 987 F.3d 284, 293 (4th Cir.), *cert. denied*, 142 S. Ct. 483 (2021) (“[E]very Circuit . . . has concluded that when one district court transfers a case to another, . . . the transferee court applies its own Circuit’s cases on the meaning of federal law.” (quotation marks omitted)); *see also Bradley v. United States*, 161 F.3d 777, 782 n.4 (4th Cir. 1998); *Clayton v. Warlick*, 232 F.2d 699, 706 (4th Cir. 1956).

the Government while acting within the scope of [their] office or employment,” 28 U.S.C. § 1346(b)(1).

“The scope of this [FTCA] waiver is limited by a series of specific exceptions outlined in the Act, each of which is considered jurisdictional.” *Welch*, 409 F.3d at 651 (citing *Medina v. United States*, 259 F.3d 220, 223–24 (4th Cir. 2001)). The “most important” FTCA exception is known as the Discretionary Function Exception or DFE. *McMellon*, 387 F.3d at 335. Pursuant to the DFE, the United States retains sovereign immunity over “[a]ny claim based upon . . . the exercise or performance or the failure to exercise or perform a discretionary function or duty on the part of a federal agency or an employee of the Government, whether or not the discretion involved be abused.” 28 U.S.C. § 2680(a). Under DFE, the “acts of subordinates in carrying out the operations of government in accordance with official directions cannot be actionable.” *Dalehite v. United States*, 346 U.S. 15, 36 (1953); *see also Gaubert v. United States*, 499 U.S. 315, 324 (1991) (“[I]f a regulation mandates particular conduct, and the employee obeys the direction, the Government will be protected because the action will be deemed in furtherance of the policies which led to the promulgation of the regulation.”). DFE also divests the Court of subject-matter jurisdiction where: (1) no mandatory or specific statute, regulation, or policy has been violated (“Prong 1”); and (2) the challenged conduct is “susceptible to policy analysis” (“Prong 2”). *Gaubert*, 499 U.S. at 322.

With respect to Prong 1 (discretion), DFE preserves sovereign immunity even if the government actors were negligent or otherwise abused their discretion. *Wood v. United States*, 845 F.3d 123, 128 (4th Cir. 2017) (“In short, the discretionary function exception is driven by separation of powers concerns, shielding decisions of a government entity made within the scope of any regulatory policy expressed in statute, regulation, or policy even when made



negligently.”); accord *Bulger v. Hurwitz*, 62 F.4th 127, 143 (4th Cir. 2023); see also 28 U.S.C. § 2680(a). With respect to Prong 2 (policy), courts need not determine “whether policy considerations *were actually* contemplated in making [the] decision.” *Smith v. Wash. Metro. Area Transit Auth.*, 290 F.3d 201, 208 (4th Cir. 2002) (emphasis in original). “In fact, if a statute or regulation permits discretion, ‘it must be presumed that decisions are grounded in policy when exercising that discretion.’” *Seaside Farm*, 842 F.3d at 858 (alteration adopted) (quoting *Holbrook v. United States*, 673 F.3d 341, 345 (4th Cir. 2012)).

Further, the Fourth Circuit is particularly wary when a plaintiff’s negligence claim “would require the judiciary to question actual, sensitive judgments” made by the military. *Wu Tien Li-Shou v. United States*, 777 F.3d 175, 180 (4th Cir. 2015) (quotation marks omitted). For good reason: “Cases that require courts to second-guess these decisions run the risk not just of making bad law, but also of ‘impinging on explicit constitutional assignments of responsibility to the coordinate branches of our government.’” *Id.* (alteration adopted) (quoting *Lebron v. Rumsfeld*, 670 F.3d 540, 548 (4th Cir. 2012)).

## **II. The FTCA Complaints Must Be Dismissed Because the United States’ Decisions About Use and Handling of AFFF Meet the Two-Prong Test Established in *Gaubert*: The Relevant Decisions Were Discretionary and Susceptible to Policy Considerations.**

Under *Gaubert*, it is Plaintiffs’ burden to prove that the military’s use and handling of AFFF were non-discretionary or were not susceptible to policy considerations. *Welch*, 409 F.3d at 651; *DeOrio*, 2021 WL 3856207, at \*2. The immense evidentiary record overwhelmingly defeats any such argument.

**A. The Military’s Use of AFFF in Fire Training and Hangar Fire-Suppression Systems Is *a fortiori* Protected by DFE.**

As a threshold matter, much of the conduct Plaintiffs challenge in the FTCA Complaints—specifically, the training with AFFF, and the use of AFFF in hangars with known false activations—were both part of the DoD’s overarching AFFF program. As a matter of law, these activities are protected by the DFE. *Gaubert*, 499 U.S. at 324.

The Supreme Court of the United States and the Fourth Circuit have repeatedly held that if a federal directive mandates particular conduct, and the federal employee obeys that direction, the DFE applies. No further analysis is needed. *Id.* (“[I]f a regulation mandates particular conduct, and the employee obeys the direction, the Government will be protected because the action will be deemed in furtherance of the policies which led to the promulgation of the regulation.”); *Dalehite*, 346 U.S. at 36 (when the Marshall Plan required the manufacture and shipping of fertilizer containing ammonium nitrate to Europe and ships carrying the cargo exploded, all purportedly negligent conduct of subordinates was protected by DFE because the conduct was part of the Plan); *accord United States v. S.A. Empresa de Viacao Aerea Rio Grandense (Varig Airlines)*, 467 U.S. 797, 815–19 (1984) (FAA policy decision to spot check airplanes rather than to fully inspect every plane that resulted in passenger airliner plane crash was protected); *Pieper v. United States*, 713 F. App’x 137, 141 (4th Cir. 2017) (per curiam) (affirming dismissal of FTCA claims arising out of disposal of pathogens and chemical wastes in unlined pits because “the very conduct the plaintiffs challenged—the disposal of potentially contaminated materials in Area B—was expressly contemplated by the regulation itself”).

It is undisputed that, from 1970 through at least the late 1980s, the military mandated that fire training would occur several times a year in unlined pits, where jet fuel ignited the fires and AFFF was used to extinguish the fires. Walker Decl. (Ex. I) ¶¶ 15–16; Bowling Decl. (Ex. C)

¶ 9. The policy reason underlying this decision was to train as “realistic[ally] as possible,” so as to “reinforce the ability to perform and the courage to act on tasks essential to fire fighting and rescue.” Walker Decl. (Ex. I) ¶¶ 21–22; Ex. 7 to Walker Decl. (AFR 92-1 (Dec. 1, 1988), AF10-00000042 at 52 (§ 1-21), 61 (§ 3-7(a)) & 62 (§ 3-7(e))). From the 1990s through 2019, training with AFFF continued, albeit in lined pits and less frequently. Wagner Decl. (Ex. H) ¶ 22; *see* Ex. 15 to Wagner Decl., AF06-00000544. DoD banned training with AFFF in 2019. Wagner Decl. ¶ 22.

Similarly, in the 1970s, the military specifically mandated the use of AFFF in certain hangars, many equipped with delicate sensors, knowing that inadvertent activations would occur and AFFF would thereby be released into the environment. Ex. R (Krasner, DoD06-00017344 at 389 (§ 6.5)). The military reaffirmed its decision in 2015 when it decided to continue to use foams in hangars and even advocated for more delicate sensors, knowing that there could be more false activations, because modern weaponry can burn in 60 seconds, and seconds matter when an aircraft is engulfed in flames. Ex. T (Biddle Presentation), Slide 9. The impact of the explosion of these weapons systems, or even just the planes themselves, can jeopardize the aircraft, the hangar, the installation population, and even the neighboring community. Walker Dep. (Ex. L) 338:1–340:3. Based on what it knew at the time about AFFF, the military used AFFF to avoid these catastrophic events. That decision did not change until 2021, with the Air Force’s “Sundown Policy” (Ex. S), based on a fuller development of science related to PFAS. In 2023, the Army was still using AFFF in nearly 150 hangars. Wilkus Decl. (Ex. J) ¶¶ 23, 25.

The military’s decisions to train with AFFF and to use AFFF in hangars were pursuant to an overall military program for force readiness. Certainly, they are entitled to the same protection that the Fourth Circuit has previously afforded to military waste disposal crews. *See*,

*e.g., Pieper*, 713 F. App'x at 141. Because the military's use and handling of AFFF in training and hangars was pursuant to military policy, it is protected.

**B. All of the Military Activities Challenged in the FTCA Complaints Are Protected Under the Two-Pronged DFE Test in *Gaubert*.**

Plaintiffs' training and hangar claims fare no better under the two-pronged DFE test established in *Gaubert*. To the extent that Plaintiffs challenge conduct other than fire training and the use of AFFF in hangar fire-suppression systems—such as handling and disposal of AFFF—the outcome is the same. There is no evidence that any federal employee violated a *mandatory* and *specific* federal directive relevant to the conduct at issue; moreover, the evidence overwhelmingly establishes that the military's decisions on how to use and handle AFFF were grounded in (and in fact were in furtherance of) policy. *Gaubert*, 499 U.S. at 322–23.

Prong 1 of the *Gaubert* test considers whether the acts involved “an element of judgment or choice.” 499 U.S. at 322 (quotation marks omitted). If the acts involve discretionary judgment, satisfying Prong 1, the Court proceeds to *Gaubert* Prong 2, which asks “whether that judgment is of the kind that the discretionary function exception was designed to shield.” *Id.* at 322–23. Finally—to state the obvious—Plaintiffs must establish that the directive allegedly violated was “in existence” at the time the government agent engaged in challenged conduct, *Indem. Ins. Co. of N. Am. v. United States*, 569 F.3d 175, 180 (4th Cir. 2009), and that there is a causal nexus between the alleged violation and Plaintiffs' injury, *Loughlin v. United States*, 286 F. Supp. 2d 1, 18 (D.D.C. 2003), *aff'd*, 393 F.3d 155 (D.C. Cir. 2004). Because Plaintiffs cannot prove that the military's handling and disposal of AFFF violated a specific, mandatory federal directive—and because the military's use and handling of AFFF was unquestionably the type of conduct that the DFE was meant to shield—dismissal is warranted.

*1. Plaintiffs Cannot Identify a Mandatory Federal Directive Applicable to the Challenged Conduct that Dictated Precisely How the Military Was to Act.*

The United States has submitted sworn testimony that no military policy restricted the military's use and handling of AFFF before 2016. *See, e.g.*, Walker Decl. (Ex. I) ¶ 51 (“At no time during my tenure in the USAF from 1978 through my retirement in 2014 was there any USAF regulation or environmental rule or guideline forbidding the USAF from using legacy AFFF or requiring the USAF to treat it as a hazardous substance for purposes of disposal.”); Ex. 16 to Wagner Decl. (Ex. H), AF02-000002524 (Deputy Assistant Secretary of the Air Force explaining in 2017 that “PFOS/PFOA are neither ‘hazardous substances’ nor ‘hazardous wastes’; therefore, “existing statutes or regulations largely do not address how to manage wastes derived from PFOS/PFOA releases); Ex. 10 to Eversley Decl. (Ex. E), FF\_ARM02\_00011975 at 975 (explaining Army understanding as of June 2017 that “AFFF is not considered a hazardous waste and is not required to be treated as such during disposal”).

Nothing in the immense record is contrary to the sworn testimony and other evidence discussed above. To restrict an agency's discretion, a federal directive must contain an “expressly articulated standard.” *Goldstar (Panama) S.A. v. United States*, 967 F.2d 965, 970 (4th Cir. 1992); *see also Pornomo v. United States*, 814 F.3d 681, 691 (4th Cir. 2016) (only an “express[] proscri[ption]” that “flatly bar[s]” a “particular course of action” may eliminate an agency's discretion). Correspondingly, a *general* command that fails to “specifically prescribe[] a course of action” does not defeat Prong 1, *Berkovitz*, 486 U.S. at 536; nor does a protocol that merely *recommends* a course of conduct, *Indem. Ins. Co. of N. Am.*, 569 F.3d at 180–81. Even a “lengthy and complex” internal guidance document containing a few passages that speak in mandatory terms does not meet the standard. *Holbrook*, 673 F.3d at 347. Courts in the Fourth Circuit have repeatedly rejected efforts to defeat Prong 1 of DFE where the cited directive was

insufficiently precise. *See, e.g., Baum v. United States*, 986 F.2d 716, 722 n.2 (4th Cir. 1993) (construction standard providing that “[s]ubstantial railings along each side of the bridge shall be provided for the protection of traffic“ was “far too general to serve as a mandatory regulation”); *Waverley View Invs., LLC v. United States*, 79 F. Supp. 3d 563, 571 (D. Md. 2015) (“To prove the Army lacked discretion, [plaintiff] must point to a directive that gave the United States *specified* instructions that it [wa]s compelled to follow” in handling hazardous substances (quotation marks omitted)); *accord OSI, Inc. v. United States*, 285 F.3d 947, 952 (11th Cir. 2002) (allegations that USAF dumped hazardous waste in a sanitary landfill from the 1950s through the early 1990s was protected by DFE because the relevant agency manual “provides only objectives and principles for a government agent to follow” and therefore “does not create a mandatory directive which overcomes the discretionary function exception to the FTCA”).<sup>14</sup>

Plaintiffs in the 27 FTCA Complaints do not, and cannot, cite a federal directive that mandated, in specific terms, how the military was to handle or dispose of AFFF. As a threshold matter, other than fire training, the Complaints fail to articulate exactly what conduct is even at issue—alleging only that Plaintiffs were harmed by decades of use and handling of AFFF at military installations. *See, e.g., Dou Decl.* ¶¶ 2–28. Without indicating the precise governmental conduct at issue, Plaintiffs cannot identify a federal statute or regulation that could have constrained the DoD. *Carroll v. United States*, 661 F.3d 87, 99–100 (1st Cir. 2011).

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<sup>14</sup> Like *OSI*, courts across the country share the Fourth Circuit’s rigorous Prong 1 interpretation. *See, e.g., Shea Homes v. United States*, 397 F. Supp. 2d 1194, 1199 (N.D. Cal. 2005) (regulation that sets a standard but does not tell the employee how to achieve it is not specific); *Loughlin*, 286 F. Supp. 2d at 8 (“[A] directive must ‘be mandatory and it must clearly and specifically define what the employees are supposed to do.’” (quoting *C.R.S. by D.B.S. v. United States*, 11 F.3d 791, 799 (8th Cir. 1993))).

Even if Plaintiffs had specified what conduct is at issue and had sufficiently linked the conduct to their alleged harms (they have done neither), Plaintiffs have not identified *any* mandatory and specific federal directives purportedly violated by the military’s use and handling of AFFF. *See, e.g., Anderson v. United States*, 2023 WL 8798090, at \*1 (9th Cir. Dec. 20, 2023) (affirming dismissal of putative class action claiming injuries allegedly sustained by military disposal of chemicals over decades; no mandatory and specific directive was ever identified). Indeed, **16 of the 27 FTCA Complaints do not even cite a federal directive that the United States supposedly violated in its use and handling of AFFF.** Dou Decl. ¶¶ 5, 8–12, 14, 17–22, 24, 26, 28 (Complaints brought by the City of Dayton, the City of Westfield, the County of Suffolk, the County of Westchester, Dorene Dairy, Elsinore Valley, H54b, Newkirk, New York (two complaints), Nyvchik, O’Brien, Schaap, Teune, Vander Dussen, and the Washington State Department of Corrections). These Complaints, which include all four of the FTCA Complaints alleging misconduct at Cannon AFB, are—facially—jurisdictionally deficient. *E.g., Horton v. United States*, 2014 WL 2780271, at \*4 (D.S.C. June 19, 2014) (“It is [plaintiffs’] burden to show that the discretionary function exception does not apply and to identify a specific statute, regulation, or policy that removed discretion from a federal agency’s or employee’s actions.”).<sup>15</sup>

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<sup>15</sup> Several FTCA Complaints are deficient, in whole or in part, for reasons in addition to failure to identify a mandatory or specific directive that would overcome DFE. First, the *Westchester* Complaint (No. 2:19-cv-01724) must be dismissed for lack of subject-matter jurisdiction because the County failed to exhaust its administrative remedies (*see Ex. AA* (Letter re: Failure to Exhaust)) and does not plead any basis for subject-matter jurisdiction for its tort claims against the United States (*see Westchester Compl.* ¶ 56). *Holliday v. United States*, 2019 WL 1572980, at \*1 (D.S.C. Apr. 11, 2019) (Gergel, J.) (administrative exhaustion is a jurisdictional prerequisite under 28 U.S.C. § 2675(a)). Second, takings and contract claims exceeding \$10,000, present in three FTCA Complaints, are within the exclusive jurisdiction of the Court of Federal Claims, per 28 U.S.C. §§ 1346(a) & 1491. *See City of Westfield v. United States*, No. 2:18-cv-03435 (Count 5); *Dorene Dairy Gen. P’ship v. United States*, No. 2:20-cv-04263 (Count 9); *Vander Dussen v. United States*, No. 2:20-cv-04191 (Count 9). Third, the Complaint in *Kalispel Tribe v. 3M Co.*, No. 2:20-cv-01398, contains a claim for “Breach of Tribal Trust” that

The remaining 11 FTCA Complaints purport to identify relevant federal directives, but none of them support jurisdiction in this case. For instance, several FTCA Complaints claim that the United States violated a statute or regulation without indicating what provisions were violated and how. Like the FTCA Complaints that fail to cite any directive at all, these Complaints are jurisdictionally deficient. *See, e.g., Loughlin*, 286 F. Supp. 2d at 17 (plaintiffs “cannot simply accuse the government of violating a law, regulation, or scientific standard in some general sense. The nature of the specific, mandatory constraint on its discretion must be clearly identified.” (quotation marks omitted)); *id.* (finding plaintiffs’ general reference to “assortment of environmental laws . . . [was] simply too amorphous and ill-defined to carry the day”); *see also Horton*, 2014 WL 2780271, at \*4 (citing “‘regulations’ promulgated under a variety of federal environmental statutes” is “insufficient”). The FTCA Complaints that do not explain what provision was violated (and how) fail for this reason alone.

Although it is Plaintiffs’ burden to defeat DFE (*Richmond, Fredericksburg & Potomac R.R.*, 945 F.2d at 768; *Welch*, 409 F.3d at 651; *DeOrion*, 2021 WL 3856207, at \*2), the United States will now address the directives on which the bulk of the FTCA Complaints rely.<sup>16</sup>

***The Clean Water Act.*** In the 11 FTCA Complaints that reference federal directives, at least 8 expressly allege that their FTCA claims arise out of the United States’ “violation” of the

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is cognizable, if at all, only in the Court of Federal Claims pursuant to the Indian Tucker Act. 28 U.S.C. § 1505; *Hopi Tribe v. United States*, 782 F.3d 662, 666 (Fed. Cir. 2015).

<sup>16</sup> *Cal. Am. Water v. United States* raises one unique claim, in addition to alleging that general installation operations caused PFAS contamination: It seeks damages in connection with the USAF’s 1996 CERCLA cleanup of volatile organic chemicals (“VOCs”), the process for which allegedly inadvertently introduced PFAS in the cleanup area. Compl. ¶¶ 17, 28, 29. While plaintiff may eventually have a CERCLA claim against the USAF, its claim of negligent selection and operation of a CERCLA remedy are protected by DFE. *See, e.g., Daigle v. United States*, 972 F.2d 1527, 1541 (10th Cir. 1992) (explaining that cleanup decisions involve policy choices “of the most basic kind”).



Clean Water Act (“CWA”). *See, e.g.,* (1) *B&B Inv. Props. v. United States*, ECF No. 1 ¶ 348; (2) *City of Newburgh*, ECF No. 226 ¶¶ 416–17; (3) *City of Airway Heights v. United States*, ECF No. 1 ¶¶ 162–64; (4) *City of DuPont v. United States*, ECF No. 1 ¶¶ 199–202; (5) *Fiattarone v. United States*, ECF No. 1 ¶ 4.17; (6) *Kalispel Tribe v. 3M Co.*, ECF No. 1 ¶¶ 110–13; (7) *Lakewood Water Dist. v. United States*, ¶¶ 172, 173, 175; (8) *Town of New Windsor v. United States*, ECF No. 2 ¶¶ 500–01. Additional FTCA Complaints suggest that the CWA is the basis of their claims but stop short of expressly claiming it. *But see Loughlin*, 286 F. Supp. 2d at 17. Of note, the United States is not aware of any notice of violation under the CWA ever issued relating to an installation’s use of AFFF or PFAS.

Because the FTCA claims nominally premised on a violation of the CWA conflate the two statutes, contextualization is necessary. The Federal Water Pollution Control Act (1948) was amended in 1972 and became known as the Clean Water Act. *EPA v. California*, 426 U.S. 200, 202–03 & nn.3–4 (1976). Under CWA Section 301(a), “the discharge of any pollutant by any person shall be unlawful” in the absence of a National Pollutant Discharge Permit (NPDES) permit. 33 U.S.C. §§ 1311(a), 1342(a).<sup>17</sup> The NPDES program authorizes EPA and States to issue permits allowing for the monitoring and discharge of pollutants. 33 U.S.C. § 1342(a).<sup>18</sup>

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<sup>17</sup> “Discharge” means “any addition” of any “pollutant” to “navigable waters.” *Id.* § 1362. “[N]avigable waters” means “the waters of the United States” (“WOTUS”). *Id.* Federal courts at all levels have interpreted the definition of WOTUS. *See, e.g., Sackett v. EPA*, 598 U.S. 651 (2023).

<sup>18</sup> In 1987, Congress amended the CWA to require discharge permits for run-off from storm water. The Water Quality Control Act of 1987, Pub. L. No. 100-4, provided EPA many years to develop the model permit. *Id.* § 405(p)(4)(A). However, from 1995 forward, EPA’s model stormwater permit broadly authorized non-stormwater discharges from “fire-fighting activities.” 60 Fed. Reg. 50804-01, at 13 (Sept. 29, 1995). This authorization was unchanged until 2015, when EPA revised its model permit to limit the authorization of discharges from firefighting to “emergency/unplanned fire-fighting” activities. *Ex. EE*, 2015 MSGP, § 1.1.3.1 (“Allowable Non-Stormwater Discharges from All Sectors of Industrial Activity”).

Pursuant to CWA Section 307, EPA has identified specific “toxic pollutants” that are subject to additional requirements. 40 C.F.R. § 401.15; *see* 33 U.S.C. § 1317. To this day, the CWA’s list does not include PFOS or PFOA. Beginning in 2022, while regulations are pending, EPA issued specific guidance in permit writing to address PFAS. *See, e.g.,* Ex. CC.

For purposes of this Motion, only two aspects of the CWA are dispositive, and both warrant dismissal of Plaintiffs’ FTCA claims premised on a “violation” of the CWA.

*First*, the CWA’s general prohibition on “discharge of any pollutant” is not a mandatory and specific directive relating to PFAS. 33 U.S.C. § 1311(a). And while listing and regulation as a “toxic pollutant” under Section 307 might hypothetically satisfy that requirement, to this day, the EPA’s list of toxic pollutants does not include PFOS or PFOA. 40 C.F.R. § 401.15. An environmental statute that does not specifically regulate the chemical at issue cannot supply a *mandatory* and *specific* directive that would defeat DFE. *See, e.g., Waverley View*, 79 F. Supp. 3d at 570 (“[T]he majority of the provisions [regulating the chemicals at issue] were adopted after the Army had stopped disposing of waste . . . . Those provisions are, therefore, irrelevant for the present analysis [of prong 1 of DFE.]”); *see also, e.g., Oxendine v. United States*, 2009 WL 3757517, at \*2 (D.S.C. Nov. 9, 2009) (“TCE was apparently used at Shaw AFB in the 1940 and 1950s” but “was not regulated as a toxic pollutant until 1978”).

Courts around the country agree. *E.g., In re Camp Lejeune N. Carolina Water Contamination Litig.*, 263 F. Supp. 3d 1318, 1351–52 (N.D. Ga. 2016) (“[T]he types of chemicals that caused the relevant contamination here were not regulated prior to 1985 when the Camp Lejeune wells closed.”), *aff’d sub nom. In re Camp Lejeune, N. Carolina Water Contamination Litig.*, 774 F. App’x 564 (11th Cir. 2019); *Snyder v. United States*, 504 F. Supp. 2d 136, 138–41 (S.D. Miss. 2007) (dismissing groundwater contamination claims after the

Marine Corps allegedly poured barrels of TCE and DCE into the ground because they were not regulated as toxic pollutants at the time of disposal), *aff'd*, 296 F. App'x 399 (5th Cir. 2008); *accord Bolinder Real Estate, L.L.C. v. United States*, 2002 WL 732155, at \*7, \*9 (D. Utah Apr. 24, 2002) (dismissing groundwater contamination claims for lack of a mandatory and specific directive because TCE was not regulated at the time the disposal occurred).

To the extent that Plaintiffs rely on general permit CWA language, such as limits to “trace levels” of foam in their CWA permits, these permits do not defeat Prong 1 because a “bare standard” does not tell the military what exactly it is supposed to do to meet the standard. *Shea Homes*, 397 F. Supp. 2d at 1199 (DFE applies because an allegedly violated environmental regulation that contains a “bare, numeric standard” and no specific course of conduct as to how to comply with that standard does not meet Prong 1); *see also Myers v. United States*, 2015 WL 6125255, at \*4–5 (D. Colo. Mar. 4, 2015) (DFE applies because alleged violations of CWA provisions that contain requirements but no mandatory and specific steps to comply do not meet Prong 1). In any event, standards concerning “trace levels” of foam have nothing to do with Plaintiffs’ claims of PFAS contamination.

*Second*, even if PFAS were specifically identified in the CWA (they are not), the United States would still be immune from Plaintiffs’ FTCA claims predicated on purported “violations” of the CWA, which has its own remedial scheme. Under binding law, Plaintiffs may not “mix and match” the waiver of sovereign immunity contained in the FTCA with waivers contained in other statutes, such as the CWA, to “create an action against the United States.” *United States v. Bormes*, 133 S. Ct. 12, 19 (2012); *Sánchez ex rel. D.R.-S v. United States*, 671 F.3d 86, 94–96 (1st Cir. 2012) (“It is clear that Congress did not intend that the CWA authorize civil tort actions against the federal government for damages. The plaintiffs’ theory that they may sue under the

FTCA for alleged CWA violations is expressly barred by the intent of Congress.”); *Abreu v. United States*, 468 F.3d 20, 30 (1st Cir. 2006) (“[W]hen evaluating plaintiffs’ contentions that the violation of mandatory requirements implies a waiver of sovereign immunity under the FTCA, we must refrain from imposing liability on the government when doing so would subvert a congressional decision to preclude regulated entity liability in the statute creating the mandatory directive.”); *accord Savage Servs. Corp. v. United States*, 25 F.4th 925, 938–41 (11th Cir. 2022); *see also Soo Line R. Co. v. Werner Enters.*, 2013 WL 2434880, at \*14–16 (D. Minn. June 4, 2013) (applying the reasoning in *Abreu* to RCRA-based claim).

**Executive Orders: EO #11507.** Four FTCA Plaintiffs claim that the United States’ use and handling of AFFF violated Executive Order (“EO”) 11507, regarding “Prevention, Control, and Abatement of Air and Water Pollution at Federal Facilities.” 35 Fed. Reg. 2573 (Feb. 4, 1970); *see* (1) *City of Airway Heights v. United States*, ECF No. 1 ¶¶ 205–06; (2) *City of Dupont v. United States*, ECF No. 1 ¶ 256; (3) *Lakewood Water Dist. v. United States*, ECF No. 1 ¶ 229; and (4) *Sec. Water Dist. v. United States*, ECF No. 44 ¶ 295. Plaintiffs particularly cite Section 4 of EO 11507, which instructed federal agencies to

ensure that all facilities under their jurisdiction are designed, operated, and maintained so as to meet the following requirements: . . . No waste shall be disposed of or discharged in such a manner as could result in the pollution of ground water which would endanger the health or welfare of the public.

35 Fed. Reg. 2573. However, as courts in this Circuit (and elsewhere) have held, EO 11507 does not provide the requisite specificity to overcome DFE. *E.g., Pieper v. United States*, 2016 WL 4240086, at \*4 (D. Md. Aug. 11, 2016), *aff’d*, 713 F. App’x 137 (4th Cir. 2017) (per curiam); *Waverley View*, 79 F. Supp. 3d at 570 & n.6 (characterizing EO 11507’s contents as “statements of policy goals” rather than mandatory and specific directives); *accord, e.g., Roy v. United States*, 2000 WL 760991, at \*5–6 (D. Me. Mar. 23, 2000) (holding that EO 11507 “does not

‘specifically prescribe[] a course of action for an employee to follow’ with respect to ‘rectifying’ any pollution caused by prior disposal of waste. . . . [and] provides no basis for a conclusion that the defendant’s conduct in this regard was not discretionary”).

***Air Force Regulations 91-9 and 91-10.*** Four Plaintiffs invoke Air Force Regulation (“AFR”) 91-9 and 91-10, concerning operation and maintenance of water pollution control facilities at Air Force installations, as relates to Joint-Base Lewis McChord in Washington State. **Exs. Y, Z** (respectively, AFR 91-9 (Dec. 1, 1989) & AFR 91-10 (Jan. 2, 1990)); *see* (1) *City of Airway Heights*, ECF No. 1 ¶ 208; (2) *City of Dupont*, ECF No. 1 ¶¶ 238–39; (3) *Lakewood Water Dist.*, ECF No. 1 ¶¶ 211–12; and (4) *Sec. Water Dist.*, ECF No. 44 ¶ 297. According to Plaintiffs, these AFRs “require[d] an Air Force base to adopt a standard wastewater treatment procedure to govern the discharge of industrial and nondomestic waste to the sanitary system.” *E.g.*, *City of Dupont*, ECF No. 1 ¶ 244; *Lakewood Water Dist.*, ECF No. 1 ¶ 217. Plaintiffs further allege that these AFRs required “treatment of hazardous waste and prohibited discharge of hazardous waste to the collection system.” *Id.* Plaintiffs claim that the United States violated AFR 91-9 and AFR 91-10, “by failing to have a base standard wastewater treatment procedure for AFFF and by failing to handle PFAS as hazardous waste.” *City of Dupont*, ECF No. 1 ¶ 253; *Lakewood Water Dist.*, ECF No. 1 ¶ 226.

Plaintiffs’ contention is meritless on multiple fronts. Chiefly, neither AFR mentions AFFF. Moreover, AFR 91-10 related only to potable water, not to wastewater. Further, as noted repeatedly herein, the PFAS in AFFF have yet to be designated a “hazardous waste” under any federal environmental statute. Ex. X (EPA’s PFAS Roadmap) at 4. Therefore, the United States could not have “violated” federal law by failing to treat AFFF at some point in time over the past few decades. *Waverley View*, 79 F. Supp. 3d at 570; *Camp Lejeune N. Carolina Water*

*Contamination Litig.*, 263 F. Supp. 3d at 1351–352. Finally, even assuming the AFRs had applied to AFFF in wastewater (they did not), neither AFR 91-9 nor 91-10 “specifically prescribe[d] a course of action for an employee to follow” concerning the management of hazardous substances. *See Berkovitz*, 486 U.S. at 536. Rather, these regulations set “policy guidelines defining goals, objectives and responsibilities to help the base civil engineer operate and maintain” water pollution control facilities (Ex. Y (91-9) ¶ 1) and potable water treatment facilities (Ex. Z (91-10) ¶ 1).

The few DoD provisions relied upon by the Plaintiffs provided guidance to military personnel to assist them in exercising their judgment in developing programs or complying with applicable laws. Guidance materials, of the nature cited by Plaintiffs, are not mandatory and specific federal directives. *See, e.g., Pieper*, 2016 WL 4240086, at \*4 (provisions related to Army waste disposal and handling were “closer to statements of policy goals” and not “sufficiently specific” to “bind the Army” to a particular course of conduct (quotation marks omitted)); *Freeman v. United States*, 556 F.3d 326, 339 (5th Cir. 2009) (concluding that provisions which identified responsibilities still lacked sufficient detail to remove discretion); *OSI, Inc.*, 285 F.3d at 951–52 (DFE protects USAF’s alleged negligent dumping of hazardous waste because “an agency manual which provides only objectives and principles . . . does not create a mandatory directive”); *Aragon v. United States*, 146 F.3d 819, 825–26 (10th Cir. 1998) (Air Force decisions regarding disposal of wastewater from aircraft washdown operations were discretionary because none of the Air Force regulations and manuals cited by the plaintiffs contained specific, mandatory directives); *Baum*, 986 F.2d at 721–22 (requirement “to provide a . . . safe[] and suitable approach for passenger-vehicle traffic” was insufficient to remove discretion).

The above discussion highlights why the few directives cited in some of the FTCA Complaints cannot overcome DFE. The United States cannot, and will not here, address each and every federal citation that appears in the 27 FTCA Complaints. Many, if not all, are addressed in the Factual section of this Motion and within the Declarations of the U.S. witnesses that are appended hereto (Exhibits C, D, E, F, G, H, I, J). Suffice to say, none of the FTCA Plaintiffs carry their burden of demonstrating specific and mandatory federal directives that the military's use and handling of AFFF violated.

*2. Multiple Policy Considerations Pervaded the Military's Decisions Relating to the Use and Handling of AFFF, Including the Protection of National Security; Preservation of Life; Relying on Existing Safeguards During a Period of Scientific Uncertainty; Cost; and Using New Products that Were Presumed Safe.*

Nor can Plaintiffs demonstrate that the military's use and handling of AFFF is unsusceptible to policy concerns. DFE Prong 2 considers whether the discretion exercised under Prong 1 was "of the kind that [DFE] was designed to shield," *Gaubert*, 499 U.S. at 322–23, by assessing if the decision at issue "is one which we would expect inherently to be grounded in considerations of policy," *Baum*, 986 F.2d at 721. If a statute or regulation permits discretion, it is presumed that the actor's decisions were grounded in policy. *Seaside Farm*, 842 F.3d at 858. Moreover, "discretionary acts deserving of immunity are not limited to policymaking or planning decisions; day-to-day management can also involve discretionary choices grounded in regulatory policy." *Smith*, 290 F.3d at 208. And the United States need not show that policy was *in fact* considered; the inquiry is objective. *Id.* (courts do not examine "whether policy considerations were *actually* contemplated in making [the] decision" (emphasis in original)). This test is manifestly satisfied, because overwhelming evidence shows that the military's decision to use AFFF for firefighting was policy-based.

To analyze Prong 2 of the DFE analysis, the Court’s first task is to identify the relevant decisions at issue. While Plaintiffs now appear to challenge a series of discrete acts of alleged negligence (spills, leaks, and carelessness), their characterization does not govern. As the Fourth Circuit and other courts have recognized, the relevant decision for purposes of DFE Prong 2 is the original, high-level decision that gave rise to the FTCA claims.

The Fourth Circuit’s decision in *Wood*, 845 F.3d 123, is illustrative. A civilian police officer training on a military base under a cooperative program with the local police department became paraplegic after she jumped from a mock ship onto allegedly improperly maintained mats. *Id.* at 126. The parties agreed that maintenance of the facility and delivery of warnings were both discretionary judgments under Prong 1 of DFE. *Id.* at 129. However, Plaintiff Wood argued that under Prong 2, her negligence claims were not subject to policy analysis and were instead “garden variety” negligence. *Id.* at 127. Citing *Dalehite* and *Varig Airlines*, the Fourth Circuit disagreed that specific conduct (failure to maintain the mat) were the crux of Plaintiff Wood’s claims under DFE. *Id.* at 128–29. Rather, the Navy’s overall maintenance decisions were “*within the overarching policies of a regulatory scheme* that gives officers discretion in how to implement that policy.” *Id.* at 130 (emphasis in original). The court explained:

[W]here Congress by statute and the Navy by internal policy have established a regulatory mission of making military bases available for civilian-law-enforcement training, the Navy’s decisions affecting the safety of its bases for civilian trainees should not be subjected to judicial second-guessing. Were we to hold, for example, that Wood could challenge the Navy’s decision not to place a warning sign near the mock-ship, it would open the Navy to tort liability for *every* similar decision made when allowing civilian law enforcement agencies to use its facilities. The threat of tort liability would become a tool to shape Navy policy, which is exactly what the discretionary function exception seeks to avoid.

*Id.* at 131.



As in *Wood*, the Court must assess the *overarching* decision at issue in Plaintiffs’ FTCA Complaints, not each and every subsidiary act that followed. The military is specifically delegated the responsibility to train its forces and have its equipment ready for war. *See, e.g.*, 10 U.S.C. § 9062c. Here, the overarching decision is the decision to use AFFF for firefighting on installations across the country, over a period exceeding 50 years. That decision was irrefutably based in policy: namely, protecting life and military equipment in support of our national defense. *See, e.g.*, Darwin Decl. (Ex. D) ¶ 20; Walker Decl. (Ex. I) ¶ 8; Eversley Decl. (Ex. E) ¶¶ 8, 11. If negligent decisions regarding how to train, test, or dispose of AFFF were made, they were encompassed within the overarching programmatic, policy-based decision to use AFFF for firefighting in the first place. *Wood*, 845 F.3d at 131; *Pieper*, 713 F. App’x at 141 (Army’s allegedly negligent burial and remediation of hazardous waste is protected under Prong 2 because “[t]he nature of the military’s function requires that it be free to weigh environmental policies against security and military concerns” (quotation marks omitted)); *accord, e.g., Kohl v. United States*, 699 F.3d 935, 941–44 (6th Cir. 2012) (the conduct at issue is *not* whether a federal employee negligently operated a winch, but rather whether the government had discretion in designing its training programs); *Aragon*, 146 F.3d at 824, 826 (the conduct at issue is not whether employees on Air Force base in New Mexico negligently allowed wash water laden with chemicals to reach groundwater, but rather, military base operations, which implicate policy issues “of the most basic kind”).

Even if the Court were to approach this question more granularly—by assessing, individually, the military’s use and handling of AFFF in training, hangars, emergency responses, and testing—the same outcome would be warranted. For instance, decisions concerning the conditions, manner, and type of training and use of AFFF were wholly discretionary until at least

2016, for the *policy* reason that installations have different risk profiles mandating “realistic” training; and, prior to 2016, because PFAS was not yet a concern, there was no reason to be factoring in potential health risks. Wagner Dec. (Ex. H) ¶¶ 14, 23; Ex. 16 to Wagner Decl. (directing the USAF “to develop implementation guidance . . . on how to manage PFOS/PFOA-containing waste to achieve human health protection”). Even after 2016, installations under certain circumstances continued to train with AFFF until the 2019 ban. *E.g.*, Wagner Decl. (Ex. H) ¶¶ 21–22.

Similarly, the selection of AFFF for certain hangars, made with knowledge that foam would be discharged and that it would reach water systems, was based on the Air Force’s mission requirements. *See* Ex. Q (§ 6.5). The Air Force even revisited and re-affirmed that decision in 2015. Ex. T (Biddle Presentation), Slide 9. Although the Air Force chose to continue to use AFFF in hangars, its policies regarding how to address system activations also changed, based on the growing knowledge about PFAS. *Compare* Ex. 14 to Walker Decl. (1997 ETL) § 3(B) (addressing problems with *excess foam*), *with* Wagner Decl. (Ex. H) ¶ 23 (describing a host of treatment options for *PFAS* in the 2019 AFGM). The USAF’s decision-making manifestly weighed competing policy considerations. *See, e.g., OSI, Inc.*, 285 F.3d at 953 (“The nature of the military’s function requires that it be free to weigh environmental policies against security and military concerns.”); *Aragon*, 146 F.3d at 826 (“The Base operated under military exigencies . . . . Operational decisions during this [25]-year active period undoubtedly were subject to defense and security considerations[,] which encompass the heart of military policy.”).

The overarching issue in analyzing particular decisions made during the 50-plus-year life of the military’s use and handling of AFFF is that, as the Plaintiffs advocated and the Court

accepted in the Government Contractor Defense ruling, the science concerning PFAS did not evolve until the mid-2000s. ECF No. 2601 at 20. Moreover, in that evolution, EPA has only recently begun to regulate PFAS under various environmental statutes. The historical decisions made by the military, whether it concerned how to dispose of AFFF, whether to limit fire training, or when to begin cleanup, were all based on the knowledge the military had at the time, and *all allowed for discretion*. “The passage of time gave the Government more information to digest, an opportunity to re-weigh the political, social, and economic considerations, and occasion to make a new policy judgment. The earlier judgment was no less a matter of policy because the later judgment was arguably better informed.” *Loughlin v. United States*, 393 F.3d 155, 166 (D.C. Cir. 2004); *accord In re Camp Lejeune N. Carolina Water Contamination Litig.*, 263 F. Supp. 3d at 1356. From any angle, the decisions at issue in this case are squarely within the scope of the Discretionary Function Exception.

### **III. All Failure to Warn Claims Are Also Barred by the Discretionary Function Exception.**

Approximately 8 FTCA Complaints include claims that the United States breached a duty to warn Plaintiffs that PFAS from the military’s use and handling of AFFF could or did migrate off-base and contaminate their water. They are: (1) B&B Investment Properties, (2) County of Westchester, (3) Dorene Dairy, (4) Fiattarone, (5) Schaap, (6) Teune, (7) Rajen Dairy, and (8) Newkirk (full citations available at Appendix A). Plaintiffs do not identify when this duty attached or how it was breached. These claims are barred by the Discretionary Function Exception, for the same reasons as the other negligence claims in the FTCA Complaints.

With respect to Prong 1 of DFE, none of the statutes, regulations, or other policies cited in *any* FTCA Complaint addressed (let alone mandated) warnings to neighbors or the public of PFAS exposure. Indeed, without an understanding of potential harm currently still being

addressed by EPA, it is difficult to understand what sort of warning DoD might be expected to provide, about what, or when it might have been required. Plaintiffs point to no mandatory instruction that such warnings be provided, and no such instruction has been revealed during the extensive discovery the Court has allowed. Information about the extent of AFFF in groundwater and the cleanup of the installations *is and has been* publicly available as part of the CERCLA process, and public outreach continues. *See, e.g.,* Long Decl. (Ex. G) ¶ 13. In the absence of a mandatory and specific directive to issue a warning, the government has discretion to decide what information to disclose and the timing of any such disclosure. *Clendening v. United States*, 19 F.4th 421, 435–36 (4th Cir. 2021) (citing *Minns v. United States*, 155 F.3d 445, 452 (4th Cir. 1998) and *Maas v. United States*, 94 F.3d 291, 297 (7th Cir. 1996)).

Prong 2 is also met, because the United States’ discretion concerning whether to warn of potential PFAS exposure, and the timing of any such disclosure, is “susceptible to policy analysis.” *Gaubert*, 499 U.S. at 324. Numerous circuit courts, including the Fourth Circuit, have found that decisions concerning whether to warn of contaminant exposure emanating from military operations are susceptible to policy analysis and barred the failure to warn claims. *Clendening*, 19 F.4th at 436 (contaminated water from Camp Lejeune); *see also, e.g., Sánchez*, 671 F.3d at 101–02 (pollutants released during military exercises); *Ross v. United States*, 129 F. App’x 449, 451–52 (10th Cir. 2005) (delayed warning of hazardous waste buried on Air Force Base that allegedly permeated ground water and migrated to neighbor’s property); *Loughlin*, 393 F.3d at 165 (abnormal soil sample result from land used for WWI chemical warfare program); *Maas*, 94 F.3d at 297 (radiation from clean-up operation of nuclear weapons); *Daigle*, 972 F.2d at 1542–43 (toxic air emissions during base cleanup); *Sea-Land Serv., Inc v. United States*, 919 F.2d 888, 892–93 (3d Cir. 1990) (asbestos on Navy ships); *In re Consol. U.S. Atmospheric*

*Testing Litig.*, 820 F.2d 982, 997 (9th Cir. 1987) (radiation from the nuclear weapons program).

Here, the military’s judgment regarding whether, how, and when to warn of PFAS exposure implicated and required balancing of policy factors, such as the strength and reliability of the evolving science concerning human health effects (Ex. T; *see also* Walker Decl. (Ex. I) ¶ 34); creating public concern over a chemical that was not regulated or well-understood (Bowling Decl. (Ex. C) ¶¶ 12, 16, 18); and the impact that negative information could have on the military’s operations and defense assets (Walker Decl. (Ex. I) ¶¶ 36, 43). Indeed, as the Fourth Circuit found, to issue warnings, the government would need to evaluate the evidence, assess the health threats, and then “consider how to identify potentially exposed individuals, decide what type of medium or combinations of mediums would be the best way to convey the risk to those exposed, and weigh practicality and economic constraints” which “implicate public policy, health, and safety concerns.” *Clendenning*, 19 F.4th at 436 (citing *Seaside Farm*, 842 F.3d at 859; *Maas*, 94 F.3d at 297).

### CONCLUSION

For these reasons, the United States’ motion to dismiss pursuant to Federal Rule of Civil Procedure 12(b)(1) should be granted, and the FTCA claims in the 27 Complaints listed in Appendix A should be dismissed in their entirety as against the United States.

Dated: February 26, 2024

Respectfully submitted,

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